



AEROSPACE INFORMATION REPORT

AIR5145™

REV. A

Issued 1996-12
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Superseding AIR5145

Directory of Databases Part I - Whole Body Anthropometry Surveys

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature. The authoring committee (SAE G-13 Human Modeling Technology Standards Committee) was integrated with the SAE G-45 Human Systems Integration Committee in 2016. SAE G-45 has made the decision to discontinue maintenance of this document.

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1. SCOPE:

This SAE Aerospace Information Report (AIR) lists whole body anthropometric surveys and provides current sources for the survey raw data and summary statistics.

1.1 Purpose:

The purpose of this directory is to provide a single source for accessing anthropometric survey data for human modelers, human factors specialists, and others interested in anthropometric data. It is not meant to provide detailed data on each survey, but to provide readers with enough information to allow them to make a decision about which surveys are of possible application to their work. The reader can then obtain further information and actual data from the listed points of contact.

1.2 Criteria for Inclusion:

The number of anthropometric surveys that have been conducted is extensive. These surveys have included whole body anthropometric measurements of various adult and child populations, detailed measurements of hands and feet, mass property measurements, strength measurements, and work space measurements. To make this directory possible, up-to-date, and applicable to aerospace human modeling, only anthropometric dimension and body geometry surveys are included. Also, only those surveys on which the subcommittee was able to obtain information as of 1 December 1995 are included in this document. Future parts of this document may address other types of surveys, such as mass and strength properties.

Surveys selected for inclusion were judged by the subcommittee to be of a size large enough to be useful. Smaller surveys were included when they covered a population not addressed in a more comprehensive study. When judged to contain valuable dimensional data, some mass property surveys were also included.

1.3 Procedure Used to Collect Survey Information:

Initially, the entire SAE Human Modeling Technology and Standards Committee was polled for surveys of which they were aware. Then the Human Model Definitions Subcommittee researched references and contacted researchers to obtain the specific information needed for each survey.

1.4 Disclaimer:

While every effort was made to ensure the accuracy of the information on each survey, SAE and the authors can not guarantee the material. Also, inclusion of a survey in this document does not indicate support or advocacy of the survey or its data by SAE or the authors.

1.5 Plans:

The information in this directory is constantly changing. Therefore, the Human Model Definitions Subcommittee plans to publish regular updates. Any changes or additions to the directory can be sent to:

Technical Standards Division
SAE International
400 Commonwealth Drive
Warrendale PA 15096-0001
USA

2. REFERENCES:

2.1 Related Publications:

The following publications are provided for information purposes only and are not a required part of this SAE Aerospace Technical Report.

Anthropology Research Project, "Anthropometric Source Book," NASA Reference Publication No. NASA RP-1024, Vols. I-III, July 1978.

2.2 Definitions:

Each of these definitions are made for the context of this report and are specifically in relation to anthropometry.

ANTHROPOMETRY: Measurements of the human body. The term includes the actual process of measurement, the recording of data, data summarization and documentation, and data manipulation for various analyses. It is applied to various practical purposes such as engineering design and evaluation, clothing design and sizing, forensics, health and insurance statistics, and selection of personnel for specific occupations.

CORRELATION COEFFICIENTS: (Also called coefficients of correlation) Dimensionless numbers that describe the relative trend in size of one measurement as compared to another or to several others. The correlation coefficient is a measure of the closeness of the relationship between two or more body dimensions. For example, with two dimensions, when one dimension varies independently of the other the coefficient of correlation is zero. If large values of one dimension tend to occur with large values of another and small values tend to occur with small values of another, the coefficient of correlation is positive. Perfect association will obtain a value of 1.00. A value of -1.00 indicates one dimension varies inversely in exact proportion to the other.

RAW DATA: The sets of numbers that describe the body measurements made on each individual in a survey. Raw data is required to develop accurate statistics on body measurements from a survey, such as the summary statistics described below.

2.2 (Continued):

SUMMARY STATISTICS: Numbers that describe the overall distribution of statistical data for measurements or other attributes of a population. Typical summary statistics are arithmetic mean, standard deviation, variance, and coefficient of variation. Measurements of the relative trends in size of different measurements compared to other measurements made on the same set of individuals may also be included. Examples include coefficients of correlation and covariances.

SURVEY: A process of measuring of a group of humans that usually have some common characteristic such as occupation, ethnic background, country or region of residence, age range, gender, or health status. The measurements performed may be as few as one or in the thousands, depending on the planned use of the data.

3. CHRONOLOGICAL LIST OF SURVEYS:

Each survey is listed chronologically according to the year in which final measurements were made. A brief description of the survey's purpose, demographics, measurements, and sponsor is included under each survey. To obtain the raw data or summary statistics, the availability section under each survey includes current points of contact and information on distribution limitations. Blanks indicate that information had not been found at time of printing.

The last year in which measurements were made is listed with the survey title. "Cont" means that data is continually being collected. Demographics include any criteria used in selecting the population surveyed, such as age range, gender, race, and occupation. A Y next to Traditional Measurements indicates that traditional measurement techniques, such as anthropometers and scales, were used. A Y next to Non-Traditional Measurements indicates that unique or recent measurement techniques, such as photogrammetry or laser scans, were used. An N next to these labels indicates that either traditional or non-traditional measurements were not used. A blank indicates that the type of measurements were not confirmed.

Listed under Conducted By is the actual person or organization that performed the measurements, while Sponsored By is the organization which funded the survey. For example, Company XYZ may conduct a survey, sponsored by the ABC Air Force. In other cases the same organization sponsored and conducted the survey.

While the above items deal with information at the time of the survey, the Point of Contact under Raw Data and Summary Statistics is the current source for obtaining the data. If left blank, either the data is not available or a source was not found. Also under Raw Data and Summary Statistics, are several items regarding availability. Media is the form (magnetic tape, paper, etc.) in which the data can be obtained. Any limitations on distribution are noted. A Y next to Fee indicates that there is some monetary cost to obtain the data. Similarly, a Y next to Correlation Coefficients indicates that the summary statistics include correlation coefficients.

References and any special comments on the surveys are also listed.

CONT - EDWARDS AIR FORCE BASE MAINTAINERS

PURPOSE: Documents USAF maintenance personnel anthropometry

DEMOGRAPHICS:

20-45 yrs
Male and Female
Aircraft Mechanics
U.S. Citizens

150 Subjects
24 Dimensions
Y Traditional Measurements
 Non-Traditional Measurements

CONDUCTED BY:

Bruce Hunn
412 TW/TSSH
195 E. Popson Ave.
Edwards Air Force Base CA
93524-6841
805-275-9127

SPONSORED BY:

USAF Flight Test Center
195 E. Popson Ave.
Edwards Air Force Base CA
93524-6841
805-275-9127

RAW DATA**Point of Contact:**

Bruce Hunn
412 TW/TSSH
195 E. Popson Ave.
Edwards Air Force Base CA
93524-6841
805-275-9127

SUMMARY STATISTICS**Point of Contact:**

Bruce Hunn
412 TW/TSSH
195 E. Popson Ave.
Edwards Air Force Base CA
93524-6841
805-275-9127

Media: paper

Distribution Limitations:

U.S. Government and DoD
Contractors only
Y Fee

Media: paper

Distribution Limitations:

U.S. Government and DoD
Contractors only
Y Fee
N Correlation Coefficients

REFERENCE:

NOTE: Started in 1989 to present.

FIGURE 1 - Cont - Edwards Air Force Base Maintainers

CONT - U.S. AIR FORCE TEST PILOT SCHOOL STUDENTS

PURPOSE: Documents test pilot school students anthropometry for education and testing purposes

DEMOGRAPHICS:

20-30 yrs

Male and Female

Air Force Test Pilots

USAF Personnel

200 Subjects

37 Dimensions

Y Traditional Measurements Non-Traditional Measurements**CONDUCTED BY:**

Bruce Hunn

412 TW/TSSH

195 E. Popson Ave.

Edwards Air Force Base CA

93524-6841

805-275-9127

SPONSORED BY:

412 TW/TSSH

USAF Flight Test Center

195 E. Popson Ave.

Edwards Air Force Base CA

93524-6841

805-275-9127

RAW DATA**Point of Contact:**

Bruce Hunn

412 TW/TSSH

195 E. Popson Ave.

Edwards Air Force Base CA

93524-6841

805-275-9127

SUMMARY STATISTICS**Point of Contact:**

Bruce Hunn

412 TW/TSSH

195 E. Popson Ave.

Edwards Air Force Base CA

93524-6841

805-275-9127

Media: paper**Distribution Limitations:**

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Contractors only

Y Fee**Media:** paper**Distribution Limitations:**

U.S. Government and DoD

Contractors only

Y FeeN Correlation Coefficients**REFERENCE:**

NOTE: Started in 1989 to present. Approximately 40 subjects measured per year.

FIGURE 2 - Cont - U.S. Air Force Test Pilot School Students

1993 - SNIVELY CHILDREN'S HEAD SURVEY

PURPOSE: Collect data to produce children's head forms

DEMOGRAPHICS:

2-19 yrs

Male and Female

Students/Preschool

1,035 Subjects

7 Dimensions

Y Traditional Measurements

Y Non-Traditional Measurements

CONDUCTED BY:

Bruce Bradtmiller

Anthropology Research Project, Inc.

503 Xenia Ave.

P.O. Box 307

Yellow Springs OH 45387

513 767-7149

SPONSORED BY:

George Snively Memorial Foundation

1821 Brazos

Hobbs NM

RAW DATA**Point of Contact:**

Bruce Bradtmiller

Anthropology Research Project, Inc.

503 Xenia Ave.

P.O. Box 307

Yellow Springs OH 45387

(513) 767-7226

SUMMARY STATISTICS**Point of Contact:**

Bruce Bradtmiller

Anthropology Research Project, Inc.

503 Xenia Ave.

P.O. Box 307

Yellow Springs OH 45387

(513) 767-7226

Media: disk

Distribution Limitations:

Only with permission of Snively
Foundation

Y Fee

Media: paper

Distribution Limitations:

Only with permission of Snively
Foundation

Y Fee

Y Correlation Coefficients

REFERENCE:**NOTE:**

FIGURE 3 - 1993 - Snively Children's Head Survey

1991 - ANTHROPOMETRIC SURVEY OF THE ASTRONAUT APPLICANTS AND ASTRONAUTS FROM 1985 TO 1991

PURPOSE: Design of workplace or equipment

DEMOGRAPHICS:

26-63 yrs

Male and Female

Astronaut applicants, astronauts

473 Subjects

16 Dimensions

Y Traditional Measurements

 Non-Traditional Measurements

CONDUCTED BY:

Anthropometric and Biomechanics
Lab.

Johnson Space Center

Houston TX

SPONSORED BY:

National Aeronautics and Space
Administration

Johnson Space Center

Houston TX

RAW DATA

Point of Contact:

James C. Maida

NASA Johnson Space Center

Mail Code SP34

Houston TX 77058

713-483-1113

SUMMARY STATISTICS

Point of Contact:

John Jackson

Human Factors Project Office

Johnson Space Center

Houston TX 77058

713-483-3712

Media: electronic

Distribution Limitations:

Written request only, case by case
decision

 Fee

Media: paper

Distribution Limitations:

Unlimited

N Fee

N Correlation Coefficients

REFERENCE: Rajulu, S.L. and Klute, G.K. (1993). "Anthropometric Survey of the Astronaut Applicants and Astronauts From 1985 to 1991." NASA Ref. Publ. 1304, Houston TX

NOTE:

FIGURE 4 - 1991 - Anthropometric Survey of the Astronaut Applicants and Astronauts from 1985 to 1991

1991 - ETUDE ANTHROPOMETRIQUE DES PERSONNELS MILITAIRES DES ARMEES

PURPOSE: Updating the morphological data on males and females, French, military population

DEMOGRAPHICS:

19-40 yrs
Male and Female
Military: Infantry, Navy, Air Force
French

1,000 Subjects
72 Dimensions
Y Traditional Measurements
 Non-Traditional Measurements

CONDUCTED BY:

D.G. Ignazi
Lab. Anthropologie Appliquee
45, rue des Saints-Peres
Paris 75006
France
33 1 42 86 20 36

SPONSORED BY:

DRET-DGA
26 Bd Victor
00460 armees
33 1 45 52 43 21

RAW DATA**Point of Contact:****SUMMARY STATISTICS****Point of Contact:**

P.A. Coblentz/D.G. Ignazi
ErgoDATA
Lab. Anthropologie Appliquee
45, rue des Saints-Peres
Paris 75006
France
33 1 42 86 20 36

Media:**Distribution Limitations:**

Not available
 Fee

Media: paper, disk, on-line network**Distribution Limitations:**

Y Fee
Y Correlation Coefficients

REFERENCE:**NOTE:**

FIGURE 5 - 1991 - Etude Anthropometrique des Personnels Militaires des Armees

1990 - ERGONOMIC DATA OF CHILDREN IN THE NETHERLANDS

PURPOSE: Several developmental characteristics relevant to product design were assessed

DEMOGRAPHICS:

2-13 yrs

Male and Female

Dutch

2,245 Subjects

40 Dimensions

Y Traditional Measurements Non-Traditional Measurements**CONDUCTED BY:**

L.P.A. Steenbekkers

Faculty of Industrial Design

Engineering

Delft University of Technology

Jaffalaan g, 2628 BX Delft

The Netherlands

31 15 78 3181

SPONSORED BY:

"Praeventiefonds"

Frankenstraat 3

2582 SC's-Gravenhage

The Netherlands

31 70 35 40300

RAW DATA**Point of Contact:**

Author or publisher

Delft University Press

Stevinweg 1

2628 CN Delft

The Netherlands

31 15 78 3254

SUMMARY STATISTICS**Point of Contact:**

L.P.A. Steenbekkers

Faculty of Industrial Design

Engineering

Delft University of Technology

Jaffalaan g, 2628 BX Delft

The Netherlands

31 15 78 3181

Media: paper**Distribution Limitations:**Y Fee**Media:** paper**Distribution Limitations:**Y FeeY Correlation Coefficients

REFERENCE: Child development, design implications and accident prevention. L.P.A. Steenbekkers, 1993, Delft University Press.

NOTE:

FIGURE 6 - 1990 - Ergonomic Data of Children in the Netherlands

1990 - U.S. AIR FORCE MINI-SURVEY

PURPOSE: To capture key cockpit and helmet related measures

DEMOGRAPHICS:

Male and Female
Air Force Flyers

353 Subjects
33 Dimensions
Y Traditional Measurements
Y Non-Traditional Measurements

CONDUCTED BY:

Greg Zehner
AFAMRL/CFHW
Wright-Patterson Air Force Base OH
45433-7022 &
Anthropology Research Project, Inc.
Yellow Springs OH 45387

SPONSORED BY:

Kathleen Robinette
AFAMRL/CFHW
2255 H Street
Wright-Patterson Air Force Base OH
45433-7022
513-255-8812

RAW DATA**Point of Contact:**

AL/CFHD
ATTN: CARD Lab
2255 H St.
Wright-Patterson Air Force Base
OH 45433-7022
513-255-0860

SUMMARY STATISTICS**Point of Contact:**

AL/CFHD
ATTN: CARD Lab
2255 H St.
Wright-Patterson Air Force Base
OH 45433-7022
513-255-0860

Media: disk

Distribution Limitations:

Y Fee

Media: report

Distribution Limitations:

N Fee
N Correlation Coefficients

REFERENCE:

NOTE: Includes three-dimensional surface head scans. Matching attempts using stature, weight, age, sex, and race with the 1988 U.S. Army "ANSUR" data sets showed large proportional differences. The conclusion was that matching to these criteria is not a suitable updating method.

FIGURE 7 - 1990 - U.S. Air Force Mini-Survey

1989 - GERMAN 18-40 YEAR OLDS

PURPOSE: General ergonomics

DEMOGRAPHICS:

18-40 yrs

Male

Germans

2,987 Subjects

138 Dimensions

Y Traditional Measurements

 Non-Traditional Measurements

CONDUCTED BY:

Hans W. Jurgens

24098 Kiel

Neue Universitat

Olshausenstrasse 40-60

Germany

SPONSORED BY:

BMVg

Bonn

Germany

RAW DATA

Point of Contact:

Media:

Distribution Limitations:

Not available

 Fee

SUMMARY STATISTICS

Point of Contact:

Media: paper

Distribution Limitations:

None

N Fee

N Correlation Coefficients

REFERENCE: FBWM 90-10, Bonn 1990

NOTE:

FIGURE 8 - 1989 - German 18-40 Year Olds

1989 - U.S. NAVY MINI-SURVEY

PURPOSE: To collect baseline measurements and determine feasibility of matching as an updating tool

DEMOGRAPHICS:

Male and Female
Navy Flyers

400 Subjects
28 Dimensions
Y Traditional Measurements
 Non-Traditional Measurements

CONDUCTED BY:

Kathleen Robinette & Greg Zehner
AFAMRL
Wright-Patterson Air Force Base OH
45433-7022 &
Anthropology Research Project, Inc.
Yellow Springs OH 45387

SPONSORED BY:

U.S. Air Force
AFAMRL
2255 H Street
Wright-Patterson Air Force Base OH
45433-7022 &
Naval Air Systems Command
Warminster PA

RAW DATA**Point of Contact:**

AL/CFHD
ATTN: CARD Lab
2255 H St.
Wright-Patterson Air Force Base
OH 45433-7022
513-255-0860

Media: disk

Distribution Limitations:

Y Fee

SUMMARY STATISTICS**Point of Contact:**

AL/CFHD
ATTN: CARD Lab
2255 H St.
Wright-Patterson Air Force Base
OH 45433-7022
513-255-0860

Media: on-line database

Distribution Limitations:

N Fee

Y Correlation Coefficients

REFERENCE:

NOTE: Matching attempts using stature, weight, age, sex, and race with the 1988 U.S. Army "ANSUR" data sets showed large proportional differences. The conclusion was that matching to these criteria is not a suitable updating method.

FIGURE 9 - 1989 - U.S. Navy Mini-Survey

1988 - ANTHROPOMETRIC DATA OF INFANTS IN THE NETHERLANDS

PURPOSE: Body dimensions of infants were assessed, relevant to product design

DEMOGRAPHICS:

1 wk - 18 mo
Male and Female
Dutch in one province

179 Subjects
29 Dimensions
Y Traditional Measurements
— Non-Traditional Measurements

CONDUCTED BY:

L.P.A. Steenbekkers
Faculty of Industrial Design
Engineering
Delft University of Technology
Jaffalaan g, 2628 BX Delft
The Netherlands
31 15 78 3181

SPONSORED BY:

"Praeventiefonds"
Frankenstraat 3
2582 SC's-Gravenhage
The Netherlands
31 70 35 40300

RAW DATA**Point of Contact:**

Author or publisher
Delft University Press
Stevinweg 1
2628 CN Delft
The Netherlands
31 15 78 3254

SUMMARY STATISTICS**Point of Contact:**

L.P.A. Steenbekkers
Faculty of Industrial Design
Engineering
Delft University of Technology
Jaffalaan g, 2628 BX Delft
The Netherlands
31 15 78 3181

Media: paper

Distribution Limitations:

Y Fee

Media: paper

Distribution Limitations:

Y Fee
N Correlation Coefficients

REFERENCE: Child development, design implications and accident prevention. L.P.A. Steenbekkers, 1993, Delft University Press.

NOTE:

FIGURE 10 - 1988 - Anthropometric Data of Infants in the Netherlands

1988 - ANTHROPOMETRY OF JASDF PERSONNEL IN ITS APPLICATION FOR HUMAN ENGINEERING

PURPOSE: To get the information of body size measured from points of view of human engineering (applicable to cockpit and console design).

DEMOGRAPHICS:

18-51 yrs
Male and Female
Pilots, Maintenance, WAF
Japanese

912 Subjects
125 Dimensions
Y Traditional Measurements
N Non-Traditional Measurements

CONDUCTED BY:

Dr. Yukiko Kakimoto
Japan Air Self Defence Force
(JASDF)
Aeromedical Laboratory
1-2-10, Sakae-cho, Tachikawa-shi
Tokyo 190 Japan
0425-24-4131

SPONSORED BY:

JASDF
Air Staff Office
9-7-45, Akasaka Minato-ku
Tokyo 107 Japan

RAW DATA

Point of Contact:

Media:

Distribution Limitations:

Not released
__ Fee

SUMMARY STATISTICS

Point of Contact:

Atushi Kadou
JASDF
Aeromedical Laboratory
1-2-10, Sakae-cho, Tachikawa-shi
Tokyo 190 Japan
0425-24-4131

Media: paper

Distribution Limitations:

None
Y Fee
N Correlation Coefficients

REFERENCE:

NOTE: Text of survey report is in Japanese. Well illustrated with Arabic numbers in the tables. A technical paper describing several studies is available in English.

FIGURE 11 - 1988 - Anthropometry of JASDF Personnel
in its Application for Human Engineering

1988 - U.S. ARMY ANTHROPOMETRIC SURVEY (ANSUR) OF 1987-99

PURPOSE: Comprehensive update of U.S. Army men and women to address deficiencies in previous surveys.

DEMOGRAPHICS:

17-51 yrs
Male and Female
U.S. Army personnel

9,000 Subjects
158 Dimensions
Y Traditional Measurements
Y Non-Traditional Measurements

CONDUCTED BY:

John McConville
Anthropometry Research Project,
Inc.
503 Xenia Ave.
Yellow Springs OH 45387
513-767-7226

SPONSORED BY:

Dr. Claire Gordon
U.S. Army Natick Research &
Development & Engineering Center
Science & Advanced Technology Dir.
Natick MA 01760-5000
508-651-5429

RAW DATA**Point of Contact:**

DTIC or NTIS
DTIC/BR - Reference Retrieval
(Mr. Kupp)
Cameron Station
Alexandria VA 22304-6145
202-274-7633

SUMMARY STATISTICS**Point of Contact:**

Steve Paquette
NRDEC
Science & Advanced Tech. Dir.
ATTN: STRNC-YB
Natick MA 01760-5000
508-651-5430

Media: magnetic tape

Distribution Limitations:

Unclassified/unlimited
Y Fee

Media: paper

Distribution Limitations:

Unclassified/unlimited
Y Fee
Y Correlation Coefficients

REFERENCE:

NOTE: 8,000 hand photos also collected.

FIGURE 12 - 1988 - U.S. Army Anthropometric Survey (ANSUR) of 1987-99

1988 - U.S. NAVY FEMALE PERSONNEL

PURPOSE: To develop new sizing system for Navy women's uniforms

DEMOGRAPHICS:

Female
Navy personnel

1,076 Subjects
15 Dimensions
Y Traditional Measurements
__ Non-Traditional Measurements

CONDUCTED BY:

Stuart Mellian
Navy Clothing and Textile Research
Facility
PO Box 59
Natick MA 01760

SPONSORED BY:

Stuart Mellian
Navy Clothing and Textile Research
Facility
PO Box 59
Natick MA 01760

RAW DATA**Point of Contact:**

CSERIAC
AL/CFH/CSERIAC Bldg. 248
2255 H Street
Wright-Patterson Air Force Base
OH 45433-7022
513-255-4842

SUMMARY STATISTICS**Point of Contact:**

Media: disk

Distribution Limitations:

Y Fee

Media:

Distribution Limitations:

__ Fee
__ Correlation Coefficients

REFERENCE: Mellian, S.A., Ervin, C.A., and Robinette, K.M. (1991) "Sizing Evaluation of Navy Women's Uniforms," AL-TR-1991-0016, NCTRF TR No. 182, Armstrong Laboratory, Wright-Patterson Air Force Base OH.

Robinette, K.M., Mellian, S.A. and Ervin, C.A. (1991) "Development of Sizing Systems for Navy Women's Uniforms," AL-TR-1991-0017, NCTRF TR No. 183, Armstrong Laboratory, Wright-Patterson Air Force Base OH.

NOTE:

FIGURE 13 - 1988 - U.S. Navy Female Personnel

1986 - STATIC ANTHROPOMETRY OF CIVILIAN CHINESE IN TAIWAN

PURPOSE: To establish a static anthropometric data bank for Chinese civilians in Taiwan for ergonomic design applications.

DEMOGRAPHICS:

15-64 yrs
Male and Female
Clerical, students, manual workers,
etc.
Chinese in Taiwan

933 Subjects
95 Dimensions
Y Traditional Measurements
Y Non-Traditional Measurements

CONDUCTED BY:

Prof. Chang-Chung Li
National Tsing Hua University
101. Sec. 2. Kuang Fu Road
Hsinchu, Taiwan
Republic of China
886 35 715131 ext 3944

SPONSORED BY:

National Science Council
106. Sec. 2, Ho-ping East Road
Taipei, Taiwan
Republic of China
886 2 7377525

RAW DATA**Point of Contact:****SUMMARY STATISTICS****Point of Contact:**

Eric Wang
The Ergonomics Society of Taiwan
c/o Dept. of IE, Nat'l Tsing Hua
Univ.
Hsinchu, Taiwan
Republic of China
886 35 715131 ext 3967

Media:**Distribution Limitations:**

__ Fee

Media: disk, paper**Distribution Limitations:**

Limited to licensed individuals or
organizations only

Y Fee

N Correlation Coefficients

REFERENCE:

NOTE: To be published. Additional surveys are being conducted.

FIGURE 14 - 1986 - Static Anthropometry of Civilian Chinese in Taiwan

1985 - CANADIAN FORCES AIRCREW

PURPOSE: Anthropometric Survey (over 30% total Canadian Forces aircrew)

DEMOGRAPHICS:

20-53 yrs

Male

Pilots & Navigators

519 Subjects

74 Dimensions

Y Traditional Measurements

 Non-Traditional Measurements

CONDUCTED BY:

Larry E. Stewart

Human Elements, Inc.

4-123 MacDonell Ave.

Toronto, Ontario M6R 2A4

SPONSORED BY:

Dept. National Defence

Def. & Civil Inst. of Environmental
Med.

1133 Sheppard Ave. West

P.O. Box 2000

Downsview, Ontario M3M 3B9

RAW DATA**Point of Contact:**

Rita Crow

Def. & Civil Inst. of Environmental
Med.

1133 Sheppard Ave. West

P.O. Box 2000

Downsview, Ontario M3M 3B9

(416) 635-2000

SUMMARY STATISTICS**Point of Contact:**

Def. & Civil Inst. of

Environmental Med.

1133 Sheppard Ave. West

P.O. Box 2000

Downsview, Ontario M3M 3B9

(416) 635-2000

Media:**Distribution Limitations:**

 Fee

Media: paper

Distribution Limitations:

 Fee

Y Correlation Coefficients

REFERENCE: Stewart, L.E., "1985 Anthro. Survey of Canadian Forces Aircrew," Tech Report 85-12-01

NOTE:

FIGURE 15 - 1985 - Canadian Forces Aircrew

1985 - DUTCH MILITARY**PURPOSE:****DEMOGRAPHICS:**

17-25 yrs
Male
Servicemen

1,010 Subjects
41 Dimensions
Y Traditional Measurements
 Non-Traditional Measurements

CONDUCTED BY:**SPONSORED BY:****RAW DATA****Point of Contact:**

Dr. Frans E.M. Brekelmans
TNO Institute for Perception
3769 Z6 Soesterberg
Kampweg 5
The Netherlands
31 3463 14 44

Media: disk

Distribution Limitations:

Y Fee

SUMMARY STATISTICS**Point of Contact:**

Dr. Frans E.M. Brekelmans
TNO Institute for Perception
3769 Z6 Soesterberg
Kampweg 5
The Netherlands
31 3463 14 44

Media: paper

Distribution Limitations:

N Fee

Y Correlation Coefficients

REFERENCE:**NOTE:**

FIGURE 16 - 1985 - Dutch Military

1984 - 20-40 YEAR OLDS

PURPOSE: General ergonomics

DEMOGRAPHICS:

20-40 yrs

Male and Female

Italian, Yugoslavian, Turkish

2,429 Subjects

41 Dimensions

Y Traditional Measurements

 Non-Traditional Measurements

CONDUCTED BY:

Hans W. Jurgens

24098 Kiel

Neue Universitat

Olshausenstrasse 40-60

Germany

SPONSORED BY:

BAU

Dortmund

Germany

RAW DATA

Point of Contact:

SUMMARY STATISTICS

Point of Contact:

Wirtschaftsverlag NW

POB 101110

27570 Bremerhaven

Media:

Distribution Limitations:

Not available

 Fee

Media: paper

Distribution Limitations:

None

Y Fee

N Correlation Coefficients

REFERENCE: Jurgens and Pieper, FB No. 373

NOTE:

FIGURE 17 - 1984 - 20-40 Year Olds

1984 - HISPANIC HEALTH & NUTRITION EXAMINATION SURVEY - NHANES SERIES 1 #19

PURPOSE: To perform probability survey of Hispanic U.S. citizens for nutrition, health, and anthropometry.

DEMOGRAPHICS:

6 mo - 74 yrs
Male and Female
Hispanic

11,653 Subjects
17 Dimensions
Y Traditional Measurements
 Non-Traditional Measurements

CONDUCTED BY:

Kurt Maurer
National Center for Health Statistics
6525 Belcrest Rd.
Hyattsville MD 20782
301-436-8500

SPONSORED BY:

National Center for Health Statistics
6525 Belcrest Rd.
Hyattsville MD 20782
301-436-8500

RAW DATA**Point of Contact:**

National Technical Information
Service
5285 Port Royal Rd.
Springfield VA 22161
703-487-4650

SUMMARY STATISTICS**Point of Contact:**

Clifford Johnson
National Center for Health
Statistics
CDC-PHS
6525 Belcrest Rd., Rm. 1000
Hyattsville MD 200782
301-436-7485

Media: disk

Distribution Limitations:

None
Y Fee

Media: paper

Distribution Limitations:

None
Y Fee
Y Correlation Coefficients

REFERENCE:**NOTE:**

FIGURE 18 - 1984 - Hispanic Health & Nutrition Examination Survey - NHANES Series 1 #19

1982 - ANTHROPOMETRIC AND MASS DISTRIBUTION CHARACTERISTICS OF THE ADULT FEMALE

PURPOSE: Obtain anthropometric and mass distribution properties of the human body and its segments.

DEMOGRAPHICS:

Female

46 Subjects

92 Dimensions

Y Traditional Measurements

Y Non-Traditional Measurements

CONDUCTED BY:

Joseph W. Young
Federal Aviation Administration
Civil Aeromedical Institute
P.O. Box 25082
Oklahoma City OK 73125

SPONSORED BY:

FAA Office of Aviation Medicine,
National Highway Traffic Safety
Administration, and U.S. Air Force
Aeromedical Research Laboratory

RAW DATA

Point of Contact:

CSERIAC
AL/CFH/CSERIAC Bldg. 248
2255 H Street
Wright-Patterson Air Force Base
OH 45433-7022
513-255-4842

SUMMARY STATISTICS

Point of Contact:

CSERIAC
AL/CFH/CSERIAC Bldg. 248
2255 H Street
Wright-Patterson Air Force Base
OH 45433-7022
513-255-4842

Media: floppy disk

Distribution Limitations:

Y Fee

Media: paper

Distribution Limitations:

Y Fee

 Correlation Coefficients

REFERENCE: Young, J.W., Chandler, R.F., Snow, C.C., Robinette, K.M., Zehner, G.F. and Lofberg, M.S., "Anthropometric and Mass Distribution Characteristics of Adult Females," FAA-AM-83-16, Office of Aviation Medicine, Federal Aviation Administration, Oklahoma City OK, 1983.

NOTE: Three-dimensional surface data collected.

FIGURE 19 - 1982 - Anthropometric and Mass Distribution Characteristics of the Adult Female

1982 - U.S. TRUCK DRIVER AND ANTHROPOMETRIC AND TRUCK WORK SPACE DATA SURVEY

PURPOSE: Design dimensions for truck cabs

DEMOGRAPHICS:

21-64 yrs
Male and Female
Truck driver

241 Subjects
25 Dimensions
Y Traditional Measurements
Y Non-Traditional Measurements

CONDUCTED BY:

Brian E. Shaw
Essex Corporation
818-704-4204

SPONSORED BY:

Society of Automotive Engineers
400 Commonwealth Drive
Warrendale PA 15096

RAW DATA

Point of Contact:

SUMMARY STATISTICS

Point of Contact:

SAE Customer Sales Dept.
Society of Automotive Engineers
400 Commonwealth Drive
Warrendale PA 15096-0001
412-776-4841

Media:

Distribution Limitations:

Not available
 Fee

Media: paper

Distribution Limitations:

Unlimited
Y Fee
 Correlation Coefficients

REFERENCE: SAE report no. SP-712, consists of five technical papers.

NOTE: Two surveys: Both male and female, and female only.

FIGURE 20 - 1982 - U.S. Truck Driver and Anthropometric and Truck Work Space Data Survey

1981 - ISRAELI AIRCREWMEN

PURPOSE: Replace 1977 anthropometric survey data base with more accurate representative sample

DEMOGRAPHICS:

19-42 yrs

Male

Helicopter/Fighter Pilots/Navigators

360 Subjects

63 Dimensions

☒ Traditional Measurements☐ Non-Traditional Measurements**CONDUCTED BY:**

B. Ernsberg/M. Brickner

Statistical Analysis Dept. of Israeli

AF

Lavi Project

Dept of Human Engineering

AF Command

SPONSORED BY:**RAW DATA****Point of Contact:****SUMMARY STATISTICS****Point of Contact:**

Bruce Bradtmiller

Anthropology Research Project, Inc.

503 Xenia Ave

Box 307

Yellow Springs OH 45387

513-767-7226

Media:**Distribution Limitations:**☐ Fee**Media:****Distribution Limitations:**☒ Fee☐ Correlation Coefficients

REFERENCE: Ernsberg and Brickner, "Survey of Different Body Dimensions of Israeli Aircrew," Report No. YRPA 112/29, 1982

NOTE:

FIGURE 21 - 1981 - Israeli Aircrewmen

1981 - U.S. CIVILIAN MINERS - FEMALE

PURPOSE: Biomechanical and work physiology study of underground mine personnel

DEMOGRAPHICS:

19-48 yrs

Female

Hard Rock/High Coal Miners

86 Subjects

44 Dimensions

Y Traditional Measurements

 Non-Traditional Measurements

CONDUCTED BY:

Dr. M.M. Ayoub

Institute for Ergonomics Research

P.O. Box 4130

Texas Tech University

Lubbock TX 79409

(806) 742-3407

SPONSORED BY:

U.S. Bureau of Mines

Pittsburgh Research Center

P.O. Box 18070

Pittsburgh PA 15236

RAW DATA**Point of Contact:**

Dr. M.M. Ayoub

Institute for Ergonomics Research

P.O. Box 4130

Texas Tech University

Lubbock TX 79409

(806) 742-3407

SUMMARY STATISTICS**Point of Contact:**

Dr. M.M. Ayoub

Institute for Ergonomics Research

P.O. Box 4130

Texas Tech University

Lubbock TX 79409

(806) 742-3407

Media:**Distribution Limitations:**

 Fee

Media:**Distribution Limitations:**

 Fee

 Correlation Coefficients

REFERENCE:**NOTE:**

FIGURE 22 - 1981 - U.S. Civilian Miners - Female

1981 - U.S. CIVILIAN MINERS - MALE

PURPOSE: Biomechanical and work physiology study of underground mine personnel

DEMOGRAPHICS:

18-61 yrs

Male

Hard Rock/High Coal Miners

270 Subjects

44 Dimensions

Y Traditional Measurements

 Non-Traditional Measurements

CONDUCTED BY:

Dr. M.M. Ayoub

Institute for Ergonomics Research

P.O. Box 4130

Texas Tech University

Lubbock TX 79409

(806) 742-3407

SPONSORED BY:

U.S. Bureau of Mines

Pittsburgh Research Center

P.O. Box 18070

Pittsburgh PA 15236

RAW DATA**Point of Contact:**

Dr. M.M. Ayoub

Institute for Ergonomics Research

P.O. Box 4130

Texas Tech University

Lubbock TX 79409

(806) 742-3407

SUMMARY STATISTICS**Point of Contact:**

Dr. M.M. Ayoub

Institute for Ergonomics Research

P.O. Box 4130

Texas Tech University

Lubbock TX 79409

(806) 742-3407

Media:**Distribution Limitations:**

 Fee

Media:**Distribution Limitations:**

 Fee

 Correlation Coefficients

REFERENCE:**NOTE:**

FIGURE 23 - 1981 - U.S. Civilian Miners - Male

1981 - U.S. NAVY FLYERS

PURPOSE: Navy officially withdrew this survey and documentation due to flawed sampling strategy.

DEMOGRAPHICS:**CONDUCTED BY:****SPONSORED BY:****RAW DATA****SUMMARY STATISTICS****Point of Contact:****Point of Contact:****Media:****Media:****Distribution Limitations:****Distribution Limitations:****REFERENCE:****NOTE:**

FIGURE 24 - 1981 - U.S. Navy Flyers

**1980 - U.S. NATIONAL HEALTH & NUTRITION EXAMINATION SURVEY II - (NHANES-II)
SERIES 1 - #15**

PURPOSE: Repeat and augment NHANES I Survey of U.S. population

DEMOGRAPHICS:

6 mo - 74 yrs
Male and Female

20,322 Subjects
15 Dimensions
Y Traditional Measurements
Y Non-Traditional Measurements

CONDUCTED BY:

Arthur McDowell
National Center for Health Statistics
6525 Belcrest Rd.
Hyattsville MD 20782
301-436-8500

SPONSORED BY:

National Center for Health Statistics
6525 Belcrest Rd.
Hyattsville MD 20782
301-436-8500

RAW DATA

Point of Contact:

National Technical Information
Service
5285 Port Royal Rd.
Springfield VA 22161
703-487-4650

SUMMARY STATISTICS

Point of Contact:

Clifford Johnson
National Center for Health
Statistics
CDC-PHS
6525 Belcrest Rd., Rm. 1000
Hyattsville MD 20782
301-436-7485

Media: disk

Distribution Limitations:

None
Y Fee

Media: paper

Distribution Limitations:

None
Y Fee
Y Correlation Coefficients

REFERENCE:

NOTE: Second in series

FIGURE 25 - 1980 - U.S. National Health & Nutrition Examination Survey II - (NHANES-II)
Series 1 - #15

1977 - ANTHROPOMETRY OF INFANTS, CHILDREN, AND YOUTHS TO AGE 18 FOR PRODUCT SAFETY

PURPOSE: To describe anthropometric data of children that could affect risk of injury

DEMOGRAPHICS:

2 wks - 18 yrs

Male and Female

U.S. Population Mix

4,127 Subjects

87 Dimensions

Y Traditional Measurements

 Non-Traditional Measurements

CONDUCTED BY:

Richard G. Snyder

Univ. of Mich. Transportation Res.

Inst.

2901 Baxter Rd.

Ann Arbor MI 48109-2150

SPONSORED BY:

Consumer Product Safety

Commission

5401 West Bard Ave.

Bethesda MD 20014

RAW DATA

Point of Contact:

Lawrence Schneider

Univ. of Mich. Transportation Res.

Inst.

2901 Baxter Rd.

Ann Arbor MI 48109-2150

313-936-1103

SUMMARY STATISTICS

Point of Contact:

Robert Sweet

Univ. of Mich. Transportation Res.

Inst.

2901 Baxter Rd.

Ann Arbor MI 48109-2150

313-936-1073

Media: Disk

Distribution Limitations:

Special arrangements needed to
compile files

Y Fee

Media: paper

Distribution Limitations:

Y Fee

Y Correlation Coefficients

REFERENCE: "Anthropometry of Infants, Children and Youths to Age 18 for Product Safety Design," Society of Automotive Engineers Report No. SP-450

NOTE: Well documented methods and data base for linear, circumferential, and skin fold measurements.

FIGURE 26 - 1977 - Anthropometry of Infants, Children, and Youths to Age 18 for Product Safety

1977 - AUSTRALIAN PERSONNEL

PURPOSE: Anthropometric data on four major personnel subgroups: (1) Aircrew tri-service (456), (2) Army (956), (3) Navy (591), and (4) Air (942)

DEMOGRAPHICS:

13-60 yrs

Male

Servicemen

2,945 Subjects

33 Dimensions

Y Traditional Measurements Non-Traditional Measurements**CONDUCTED BY:**

A. Ross/K.C. Hendy

Aeromedical Research Laboratories

Dept. of Defense

Melbourne, Australia

SPONSORED BY:**RAW DATA****Point of Contact:**

WG CDR D Emonson

Commanding Officer

Institute of Aviation

RAAF Williams, Point Cook

Victoria

Australia 3027

SUMMARY STATISTICS**Point of Contact:**

Bruce Bradtmiller

Anthropology Research Project, Inc.

503 Xenia Ave.

Box 307

Yellow Springs OH 45387

513-767-7226

Media:**Distribution Limitations:** Fee**Media:** paper**Distribution Limitations:**Y FeeY Correlation Coefficients**REFERENCE:**

NOTE: Unilateral measurements made on left side

FIGURE 27 - 1977 - Australian Personnel