LIST OF TECHNICAL REPORTS AND MEMORANDUMS
CONCERNING HUMAN FACTOR ENGINEERING
DESIGN OF NASA-MSC EQUIPMENT

I. General

IMCC Systems and Performance Requirements Specifications (Study by Philco under Contract No. NAS 9-366)

II. Console Design

1 report with drawings and 4 memos on console configurations, room and module layouts, and display systems).

A. Console and Module Design, MOCR Design Layout

1. Human Factors Design Sketches and Released Drawings for the integrated Mission Control Center. Concor, K.
   PHO-TH106
   May 13, 1964

B. Console Design

1. Control Consoles. Oberholtzer, G.W.
   June 10, 1963

   September 25, 1963

3. IMCC Control Console Colors. Lepine, L.T.
   October 21, 1963

4. IMCC Console and Equipment Rack Color Coordination. Fisher, H.T.
   October 31, 1963

III. Console Modules

A. PBI Console Modules

(report on safety covers and H.E. specs. on PGK, SMEK, RSO, FDK.)

   November 26, 1963

B. Illuminated Indicators

1. Lamp Test of Incandescent Bulbs in Illuminated Displays. Langdoc, S.E.
   May 29, 1963

2. Dimming of Illuminated Indicators and Decimal Readouts on IMCC Consoles.
   Langdoc, S.E.
   May 29, 1963

3. 72-Event Indicator Modules. B. Costis
   August 18, 1967
4. 72-Event Indicator Module Brightness and Heat Level Study. B. Costis
   August 18, 1967

IV. Televised Displays (3 reports, 4 memos, 2 figures concerning evaluation of
display formats and equipment)

A. Evaluation of Televised Displays

   PHO-TN100
   May 22, 1963

2. Visual Display Parameters Required of a Console Mounted TV for Optimum
   Operator Perception. Fisher, H.T.
   April 27, 1963

B. Character Design

1. Design of the Characters for the Charactron System. Fisher, H.T.
   September 6, 1963

C. Flicker

   November 8, 1963

D. Phosphor Evaluation

1. Preliminary Results of Color Phosphor Evaluation. Keizer, L.
   February 7, 1966

E. Human Information Processing of Televised Information

1. Information Handling Rates for MOCR. Pittock, A.J.
   June 7, 1963

F. Legibility of Displays on 2 Television Systems with Different Lines of
   Resolution

V. Group Display System

A. Group Display Requirements

   (report concerning letter size, margins, symbol design, brightness ratios,
   resolution, and registration)

1. MOCR Group Display Requirements. Miller, G.E.
   April 30, 1963

B. Viewing Angles

   (2 memos, 2 figures and 1 drawing showing viewing angles between 17 consoles
   and 5 group display screens)

2. Bend Angle Study for MOCR Personnel. Islander, S.J. July 30, 1963


VI. Lighting Requirements: Ambient Light and Glare

(5 reports, 11 figures concerning MOCR ambient lighting requirements, glare on TV monitors, and anti-glare monitor coatings)

A. Ambient Light and Glare

1. A Study of Potential Lighting Problems in Operations and Support Areas of the IMCC. Langdoc, S.E. January 3, 1964

2. IMCC Lighting Change Requirements. Langdoc, S.E. May 29, 1963

3. Agent for Anti-Glare on TV Monitor Faces. Hendrickson, H. July 9, 1963


VII. Pneumatic Tube Console Subsystem

(4 memos, 1 figure, and 2 drawings concerning pneumatic tube design)

A. Pneumatic Tube Configuration


2. Advantages of Desk Top Loading and Delivery of the Carrier from the Pneumatic Tube Consoles in the MOCR. Paul, A.N. July 31, 1963


4. MOCR Pneu-Tube Configuration. Oberholtzer, G.W. November 13, 1963

VIII. Voice Intercom System

(1 memo stating change in dimensions)
IX. MOCR and SSR Room Layout

(1 memo on SSR layout, 1 report describing MOCR full-scale model)

A. SSR

1. Vehicle Subsystems Staff Support Room Layout. Oberholtzer, C.W.
   May 8, 1963

B. MOCR

   June 7, 1963

X. Logic Cards Coding Analysis

A. Color Coding (2 memos)

1. Transmittal of Logic Card Color Coding Proposal to NASA. Marguglio, B.W.
   November 8, 1963

   2. Color vs. alpha-numeric Coding for Logic Cards. Parris, H.L.
      November 13, 1963

XI. Flight Controller Training Program by Human Factor Instructors

A. Training Plan for Flight Controllers (4 reports 1 memo)

   August 13, 1963

   2. Flight Controller Training in Display Laboratory. Feeley, T.
      February 19, 1965

      Mission Operation Support Laboratory

XII. Digital Television Equipment

A. Human Factor Evaluation of Color TV Displays. B. Costis, R. Wheaton
   TO 921-46-DT17
   October, 1967

B. Proposed Studies of Digital Television Equipment and Display Formats

1. Evaluation of Computer Input Devices

2. Character Fonts for Digital Television Equipment

3. Display Density - A re-evaluation of RTCC Interim Facility D/TV Display
   Formats for Digital Television Systems.