



*Neurolab VEG testing - Andy Beall and Chuck November 1997*



NSBRI Neurovestibular Team Meeting Johns Hopkins 1998



Cherry visits JSC ISS VOILA mockup 2000



Heiko and MVL AG lab team 2000



Dava was flying SPHERES on one of the same flights



*Dave Miller was also aboard*



Dartmouth NSBRI collagorators: Jeff Taube, Bob Stackman with Chuck - Rat Head Direction Cell response in 0-G



Jason





*Patricia Schmidt*



RESTRICTED ACCESS  
FACILITY  
ALL VISITORS MUST CHECK IN WITH  
CONTROL CENTER  
TECHNICAL STAFF  
TELEPHONE 201-463-4330

Rick Foster, Jessica Meir, Andy Liu, Matt Smith, Dave Baumann, Ara Kulhanjian - VOILA engineering team at JSC 1999



*Dave Tomko at Moody Gardens Galveston 2001*



Pete was Captain of Lawrenceville Tennis - 2001



Jessica Marquez testing Artificial Gravity Exercise MIT 2001



*Cookout at Ian Howard's house - chef Fred Miles*



Chuck at United Training Center, Denver 2001



Crawley, Hansman, Young and 6 others taking 737-200 familiarization 2001





leave the room as you  
with doors and tables



Paul Bauer and Eric Feron - UAL 737-200 paper trainer



Chuck and brother Bill with Princeton Flying Club's orange and black IFR equipped C172



Volpe's CFII Drew Kendra in Miwa Hayashi's 757 simulator 2004



Final Exam

12/19/99 - Noon

35-0

-0

16.400 flight simulator "Doolittle Challenge" winners 2002



John Dugan and Joe Santos - Delta Airlines Logan Airport





MVL May 2004



Chuck, Bob and Antares Crew Atlantic Cup (Tortola-Bermuda-Newport) May 2004





Dick Fryberger & Zach Cutler Bermuda Race 2006



Katie and Chuck - Bermuda Race 2004



Antares Crew in Bermuda 2006



Chuck and Dave Solomon give Wobblies briefing at US Aerobatic Championships 2003



Chuck's mother Janet McMaster Oman



HRE Workstation VOILA Experiment in ISS Mockup 2003



Katie - Bermuda wreck diving 2006



Anton Aboukhalil studied fatigue in locomotive engineers 2004





Pete's Colgate Graduation 2005



Miwa Hayashi PhD Thesis Defense June 2005



Hiro Aoki NSBRI Fellow - ISS egress simulation 2004





*Norwalk CT tennis instructing*



Chuck, Dick and Marian Thornton, Sherrie Cutler and Bob Donahue - Edgartown 2005



Helen Cohen and Jon Clark MIT 2005



Jacob Bloomberg & Lars Oddson Sensorimotor Meeting 2005





Laurence Harris, Jay Buckley, Larry Young - Sensorimotor Team Meeting 2005



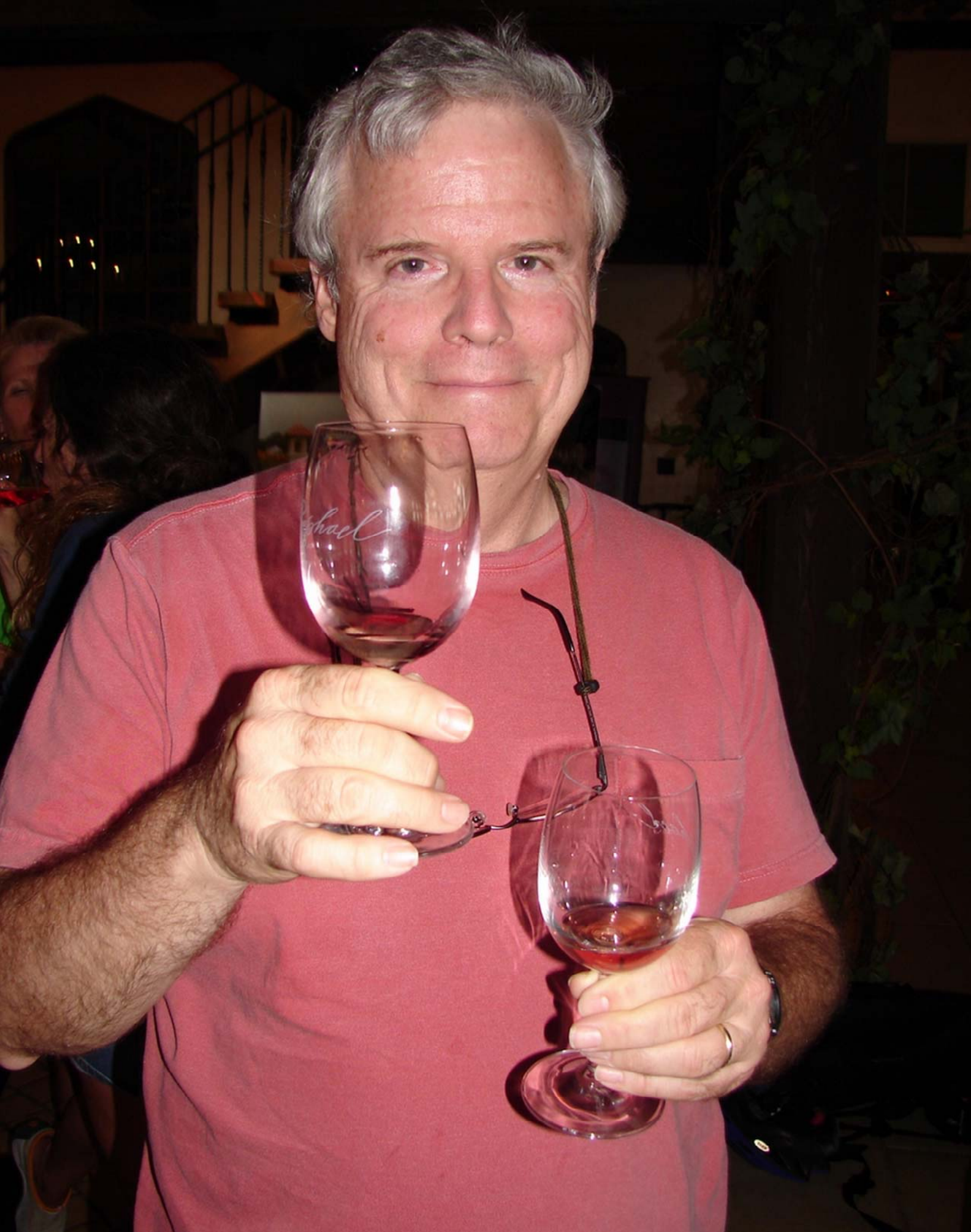
*Mill Reschke in MIT Stata Center Kiva (tilted) room 2005*



Buckey, Bloomberg, Harm, Putcha, Cohen, Young 2005



NSBRI Sensorimotor Team Meeting MIT July 2005



*Paul Houpt - winetasting in Greenport LI August 2005*



Party at Jarchows 2005



Noel Van Houtte and Chuck - both could still remember the PDP-8 RIM loader: 6023, 6021, 5357, 6026...



Farewell Dinner for Hiro and Kazumi Aoki Oct 2007





1998



Steve Robinson - kickstarted our interest in telerobotics

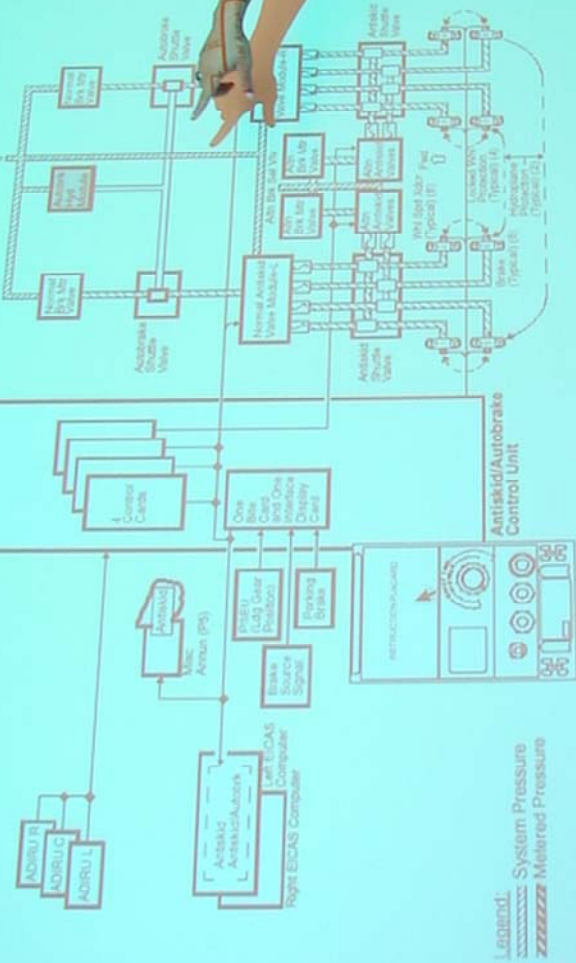


Jessica Edmonds and Heiko Hecht



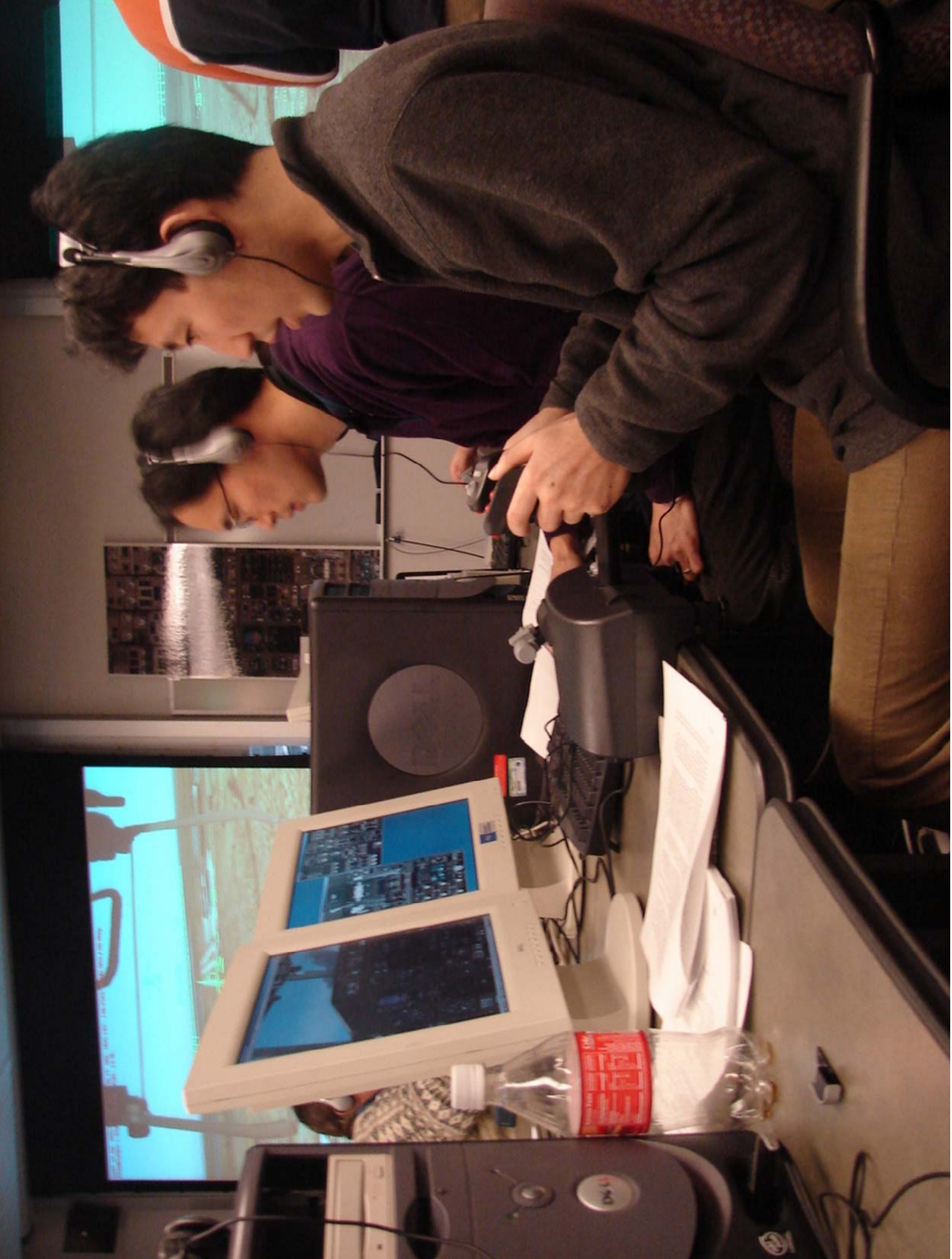
Yongki Go, Judith Burki-Cohen and Divya Chandra Farewell Lunch in Boston 2005

# Antiskid System Schematic



Antiskid System (Simplified)

Legend:  
 System Pressure  
 Metered Pressure



Andy Liu and Hiro Aoki with B767 simulator IAP 2006

# Boeing Flight Deck Philosophy

- The pilot is the final authority for the operation of this airplane.

- Both crew members are ultimately responsible for the safe operation of the airplane. They are to be trained to perform their duties with a high degree of proficiency, efficiency, and safety.

- Design systems for crew operations based on pilots' past training and operational experience.

- Design systems to be error-tolerant.

- The hierarchy of design alternatives is: simplicity, redundancy, and automation.

- Apply automation as a tool to aid, not replace, the pilot.

- Address fundamental human strengths, limitations, and individual differences – for both normal and non-normal operations.

- Use new technologies and functional capabilities only when:

- They result in clear and distinct operational or efficiency advantages, and

- There is no adverse effect to the human-machine interface.



Chuck and Brian Nield in Delta 757 Cockpit IAP 2006





Jessica Edmonds - her father flies for AAL - IAP 2006



Hiro Aoki JSC robotics training 2006



Chuck relaxing at Village Cay, Tortola March 2006

# Restaurant 'De Botter'

V I S S P E C I A L I T E I T E N

Vleesg...

Grillgerechten

- DIVERSE
- \* Zachte broodjes
  - En
  - \* Stokbroodjes
  - \* gerookte zalm
  - \* gerookte paling
  - \* Haring
  - \* filet american
  - \* Hollandse garnalen
  - \* ham
  - \* kaas

- DIVERSE
- \* pannenkoeken
  - \* nat lapfel
  - \* kaas
  - \* appel
  - \* ananas
  - \* spek
  - \* spek en kaas



Young, Jarchow and Oman Noorwijk, June 2006



Inessa Kozlovskaya - ESTEC June 2006



7th Symposium on the Role of The Vestibular Organs in Space Exploration, ESTEC, Norwijk June 2006



*Own Black - Noordwijk, 2006*



Newport Bermuda 2006





Bob Donahue and Jack McGrath after Bermuda Race 2006



Steve Bussolari RBYC Hamilton Bermuda 2006

80W

75W

70W

65W

60W

65W

# JENIFER CLARK'S GULFSTREAM

## Legend

- S = Gulf Stream
- E = Warm Eddy
- E = Cold Eddy
- HW = Shelf Water
- LW = Slope Water
- SR = Sargasso Sea Water

## Direction of Flow

- Thermal Boundary
- ~ Canyon Line
- M, W Canyon Locations
- Hague Line

[gulfstrm@erols.com](mailto:gulfstrm@erols.com)  
 phone: (410)286-5370

CHART 10  
 3 ROUTES

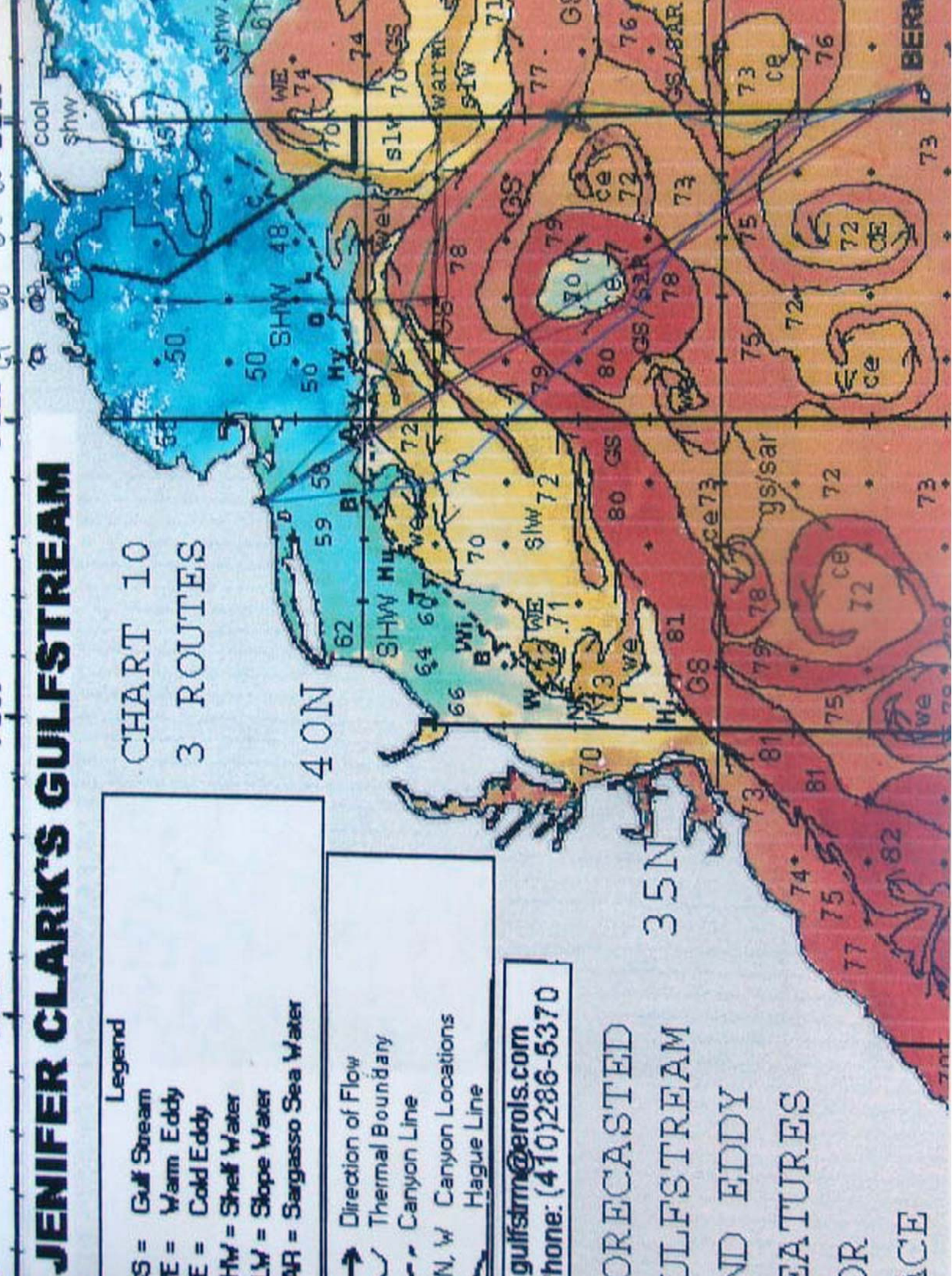
40N

35N

FORECASTED  
 GULFSTREAM

AND EDDY  
 FEATURES

OR  
 ACE





*Cherry's mother Connie Husted*



Brian, Jaime Mateus and Ryan Odegard IAP 2007



Dr. Jessica Marquez and family, June 2007



22nd Annual Meeting  
→ Doh Namoon  
5/26 to 5/27



Liling Ren, PhD with wife and son Graduation 2007



Larry Young and Heiko Hecht





Brian Nield, Chuck, Chris Nield Advanced Diving Course Caicos Island June 2007



*Chuck diving in West Caicos 2007*



John Allum Boston visit 2007



Brian Nield '78 - Boeing's Chief engineer for 777 Safety, Certification and Performance



Kevin, Jason Zabriski, Katie, and Nicole Fallat sailing in the San Juans 2007



*Cherry and Chuck in Cook's Bay, Moorea, Tahiti August 2007*



MEEI Jenks Lab for Vestibular Physiology picnic at Dan Merfeld's house, September 2007

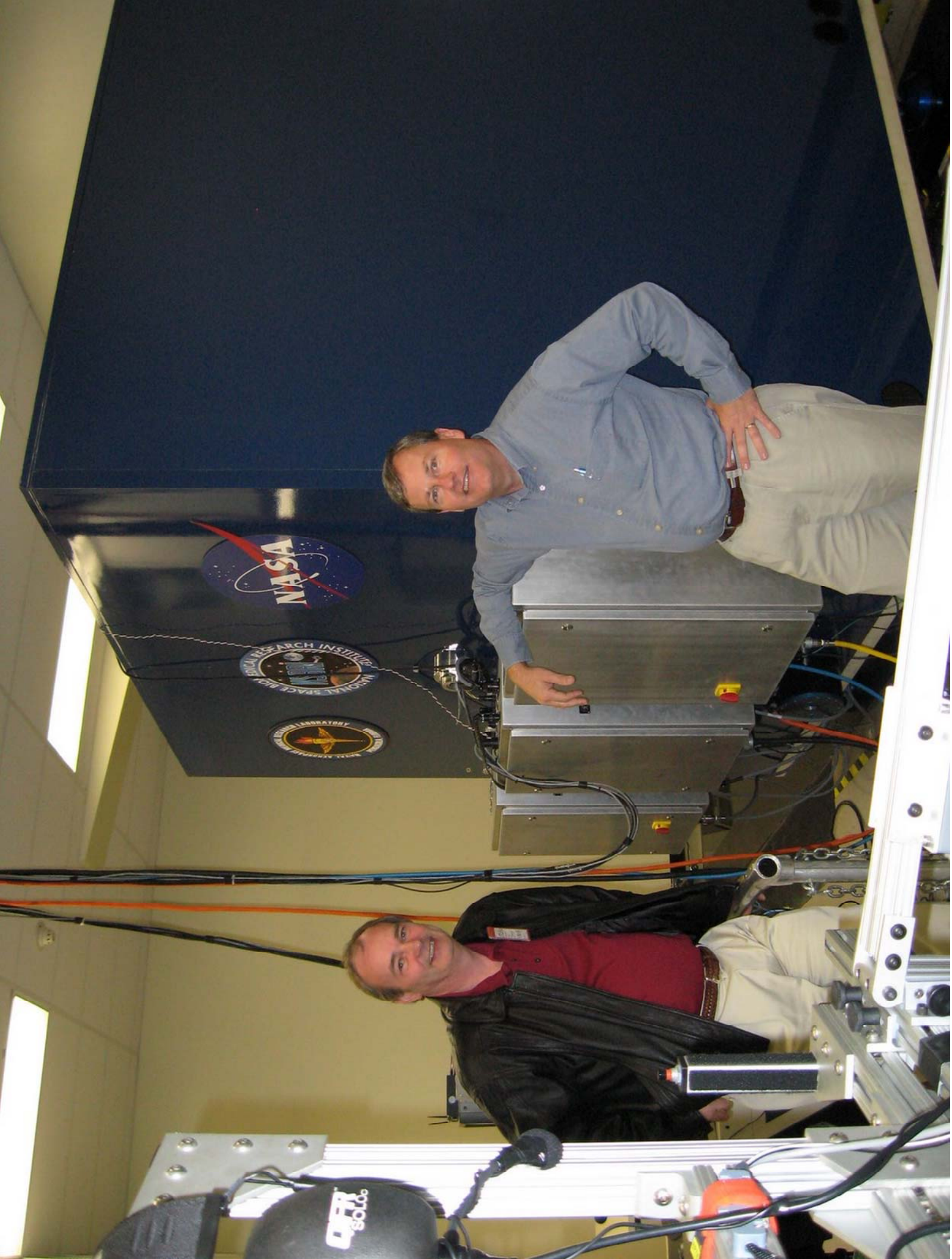


Ale Menchaca Brandan, Hiro Aoki, Adrian Collins and Zakiya Tomlinson - dinner at Oman's 2007





Connie and Cherry 2007



Gilles Clement & Scott Wood with new tilting sled JSC Nov 2007



Kimballs and Omans at Ballroom Dancing Recital - Boston 2008



↑  
FLATION  
PULL TO REMOVE

James Waldie - IAP 2008



Chuck doing a grapple, with Paul Williamson instructing



Paul Williamson and Andy Liu



Pete and Megan Riley 2008



Chuck's father Bill Sr and Cherry. That's an extra dry Beefeater with two olives.





MVL farewell for Adrian Collins 2008



Chuck, Mike and Marcia Wilson - Aruba 2008



Maria Kozhevnikov - NSBRI spatial memory project collaborator



Jessica Edmonds PhD thesis defense April 2008



Andrew Rader is studying motion perception while swinging at MEEI, 2008



Ron Small and Mike Newman demoing SDAT and OBSERVER May 2008





Bill Oman Senior (96) and granddaughter





Katie's wedding 2008



25 years later, Katie and Kevin were married on nearly the same spot



Chuck's brother Bill and partner Larry Crummer - Rossmoor, CA 2008



Cherry, Mary Ann and Doug Marmon, Winchester Boat Club picnic 2008



*Pierre Selva - Supaero visiting student 2009*



Cherry, Ginny and Bill Oman, Kevin Fray and Katie - Rossmoor CA 2008



Chuck's brother Bill and Sister Ginny



Paul and Susan Houpt - October 2008





"16.767" class at Logan Airport 2009



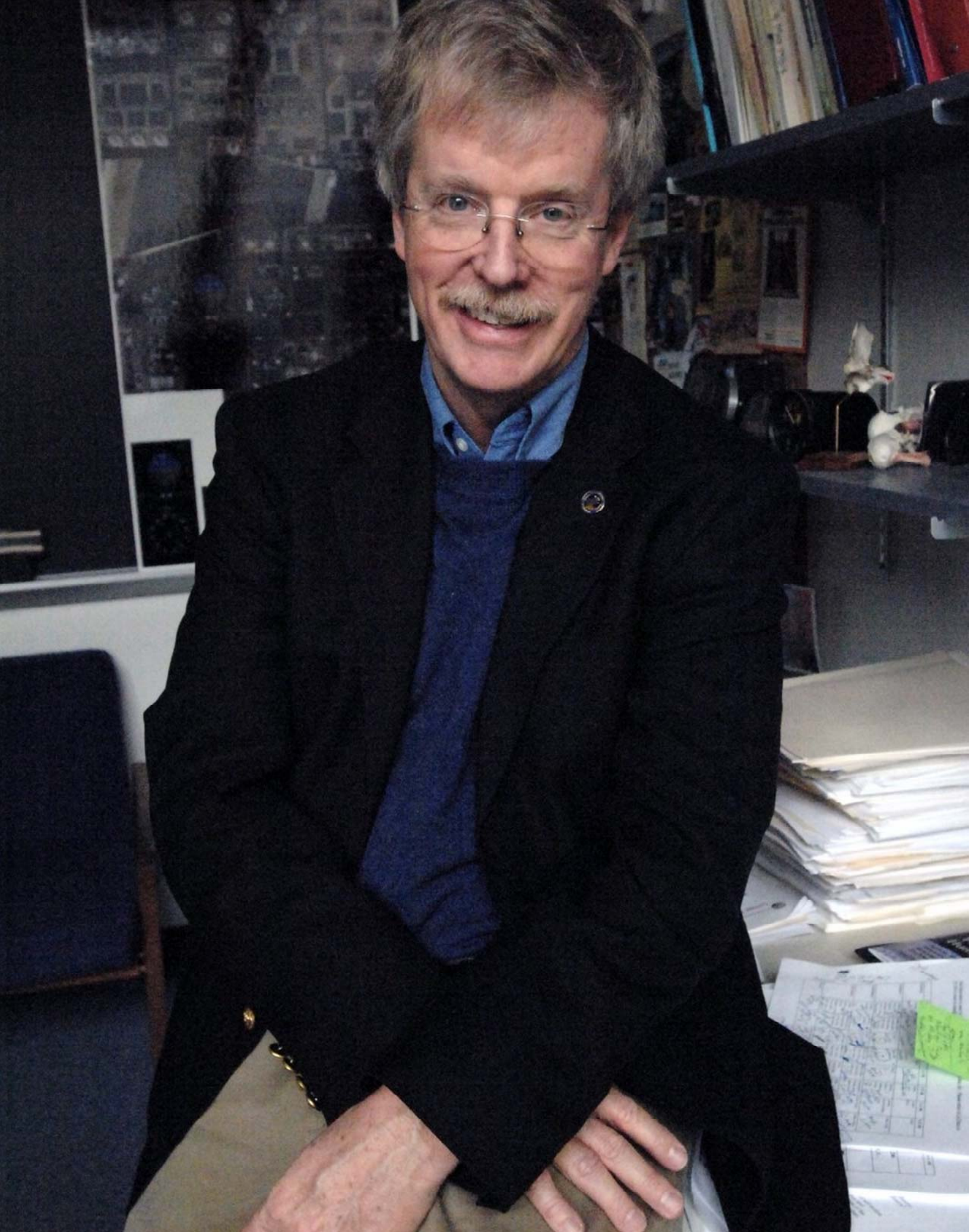
Teresa Pontillo, Zakiya, Andy, Alan, Chuck, Joe Silverman - 2009



Zakiya Tomlinson (now a JSC robotics instructor) and her parents 2009



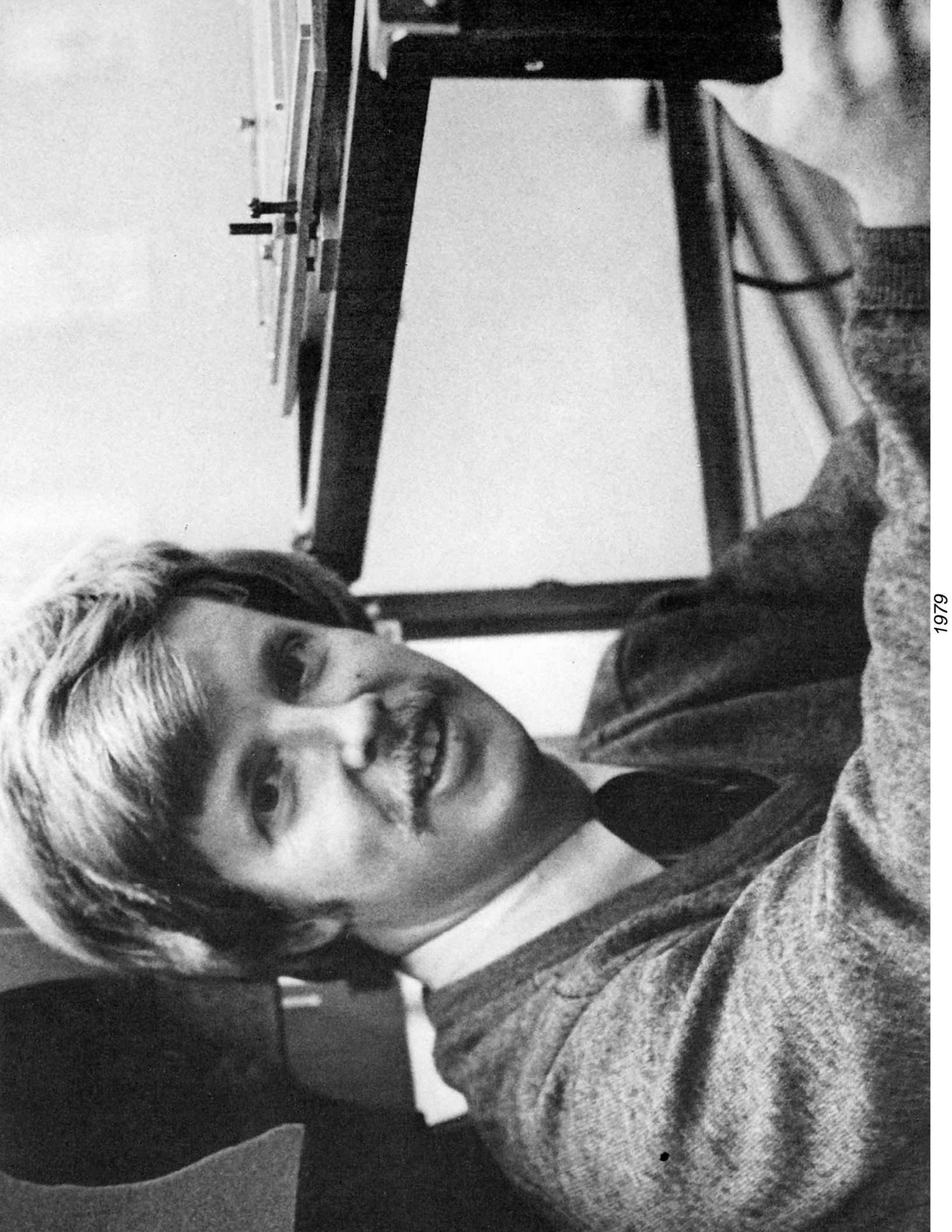
*Chuck flying Karl Bilimoria's NASA Ames VMS Lunar Landing Simulator January 2009*



2009



MVL's resident anarchist Cocoa Beach, FL 1985





1983







MVL Meeting in 33-206, May 1967. VanHover, Forster (with briefcase), Young, Yasui, VanHoutte, Kirkpatrick, Nashner, Shirley, Meiry (back to camera)



Syozo Yasui, Nori Goto, John Tole, and Anil Phatak by wind tunnel January 1969



Pitu Mirchandani and John Tole at 77 Mass Ave, March 1969



*Serani, Sera and Pitu Mirchandani visit Winchester, 1991*



*Pitu Mirchandani and John Tole at Anil Phatak's Super Bowl III Party 1969 - Namath's Jets won.*



Larry Young racing at Waterville Valley, March 1969

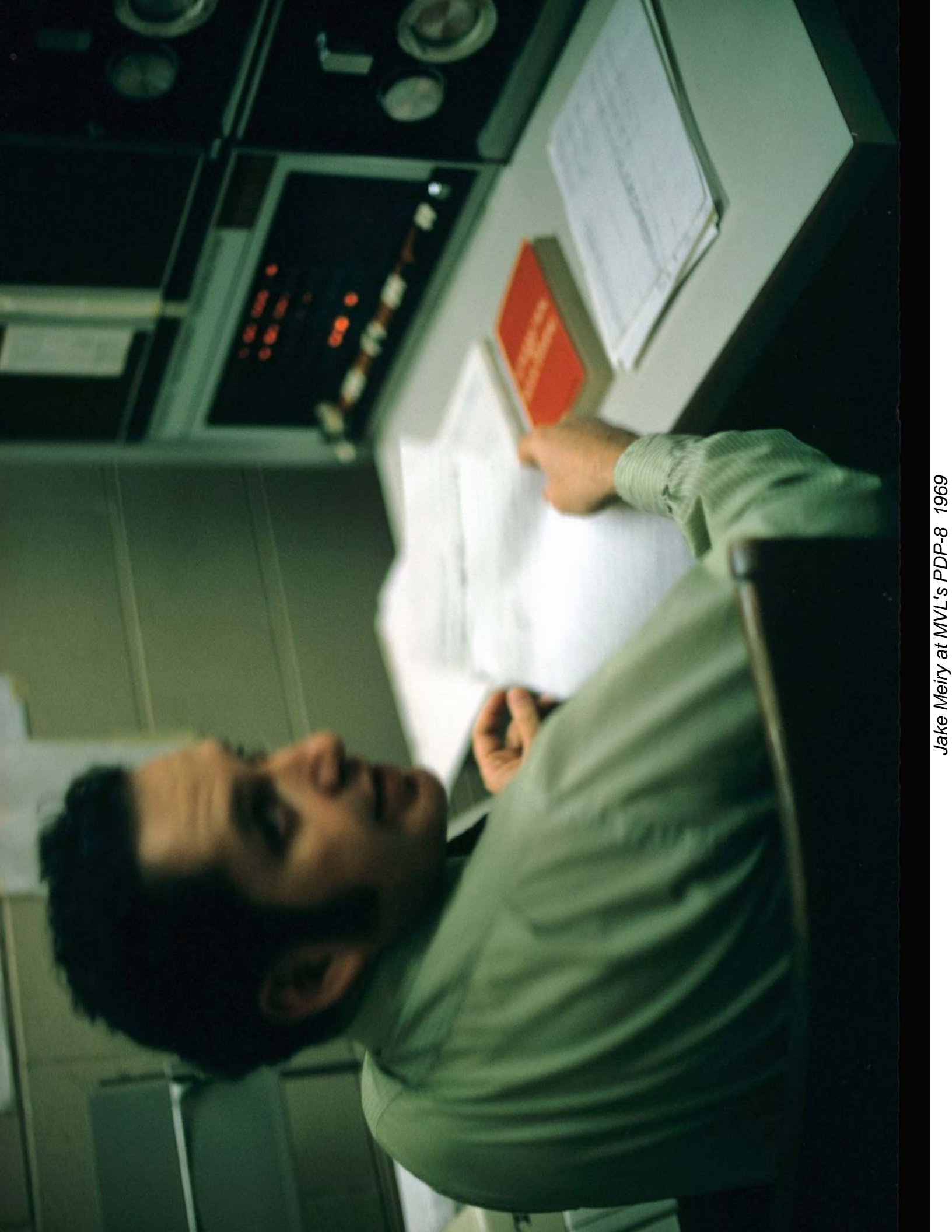


John Tole and Mimi Galiana MVL 1969





Andrea Wasserman, MVL Secretary 1969



Jake Meiry at MVL's PDP-8 1969



COMPLETE YOUR JOB BY REMOVING  
ALL HAND TOOLS AND LOOSE  
MATERIALS TO PREVENT ACCIDENTS

Jake Meiry in MVL's NE-2 Simulator, Building 17A (gone now), about 1968



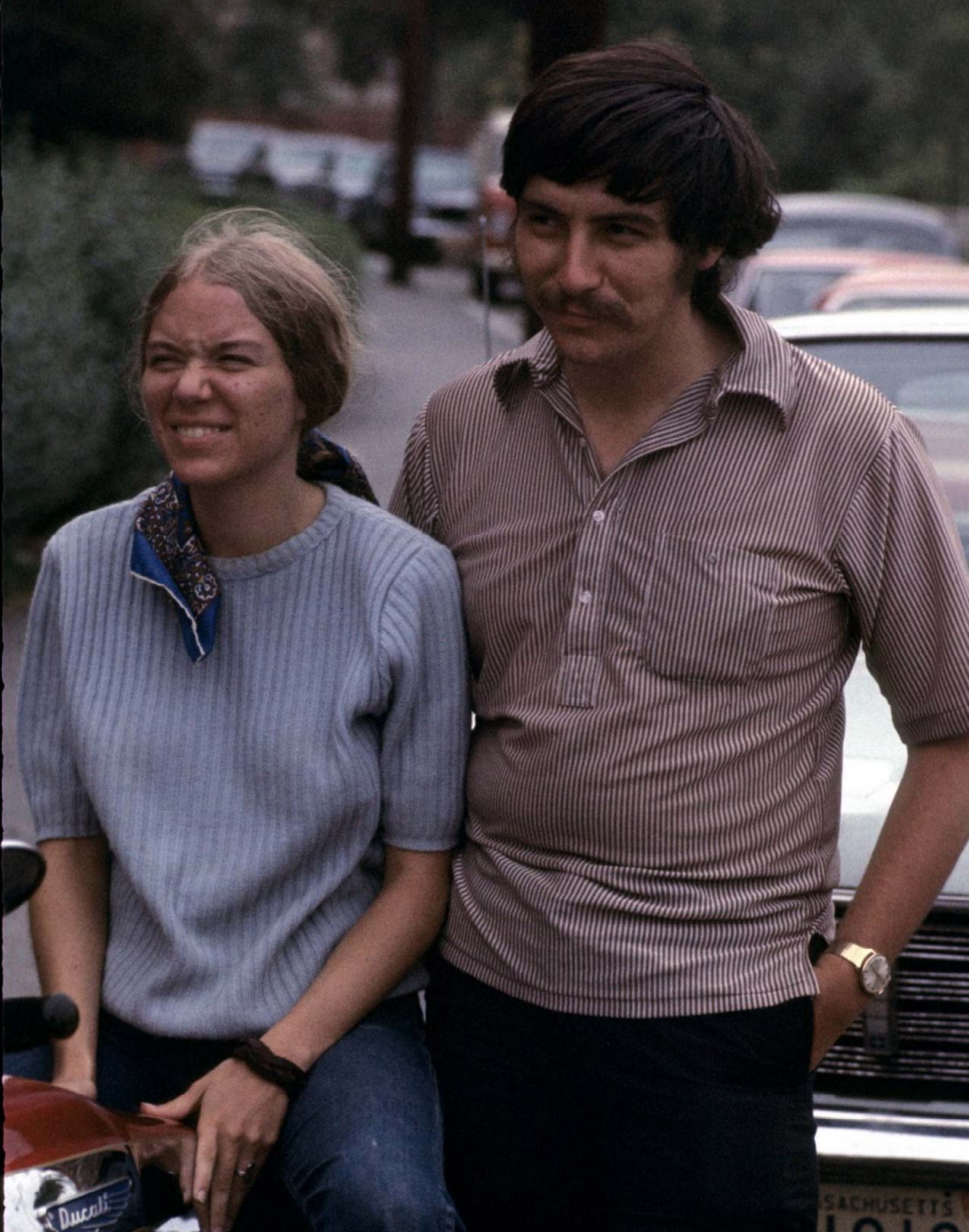
Noel Van Houtte and PDP-8, February 1969



MVL Farewell party for Syozo and Tomoko Yasui, 1974: Ormsbys, Tole, Al Weiss, Jim Tang, Dilip Mathur, NoriGoto, Larry and Jody, Larry Leifer, Chuck, Tomoko



Noel and Monique Van Houtte, flying with Chuck, Hanscom Field, 1970

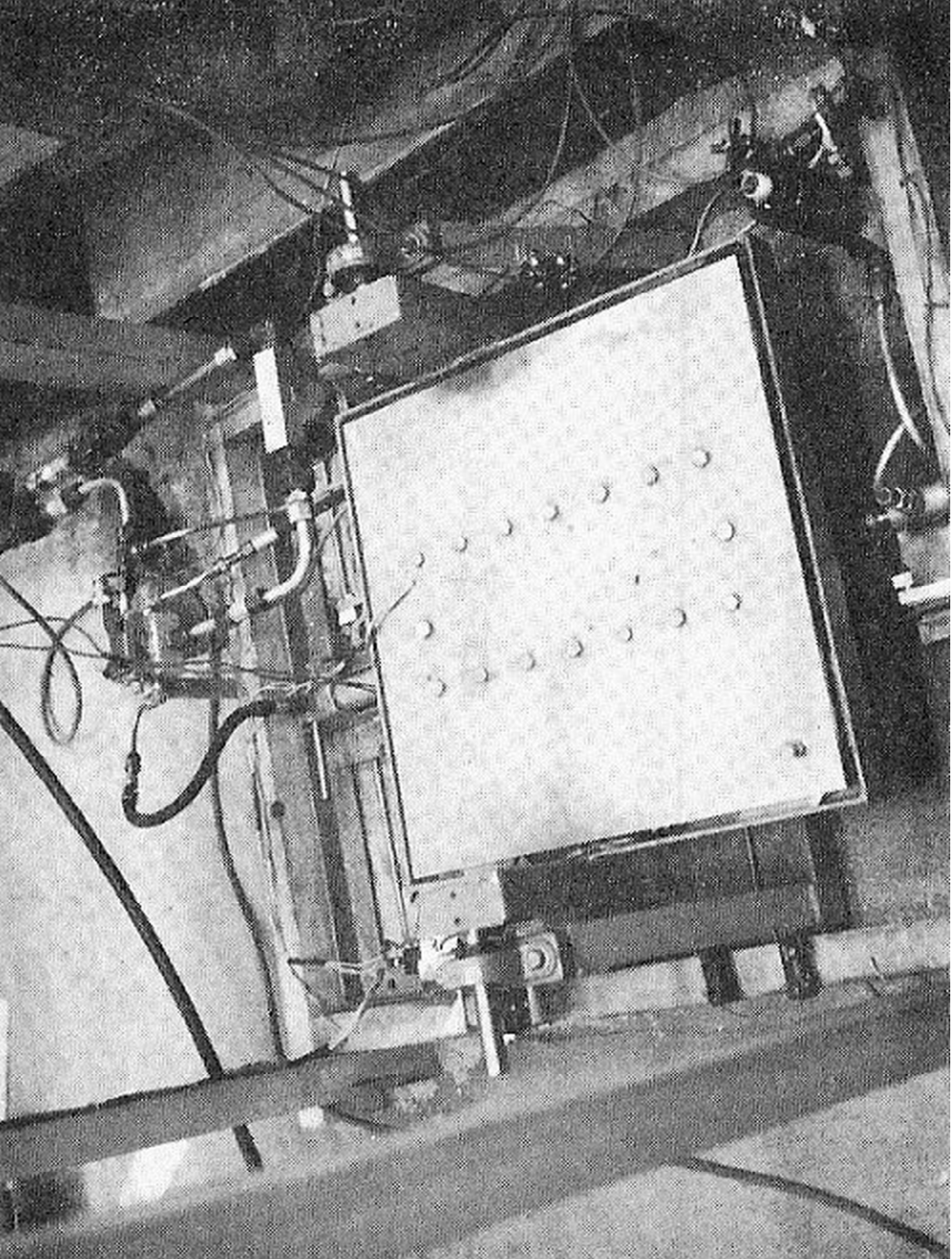


*Nancy Mountain and Ralph Brown, Chuck's grad school roommates, July 1970*



Lew and Gail Nashner, Endicott House Doctoral Dinner, 1970





Lew Nashner's original MVL posture platform - forerunner of Neurocom - 1969



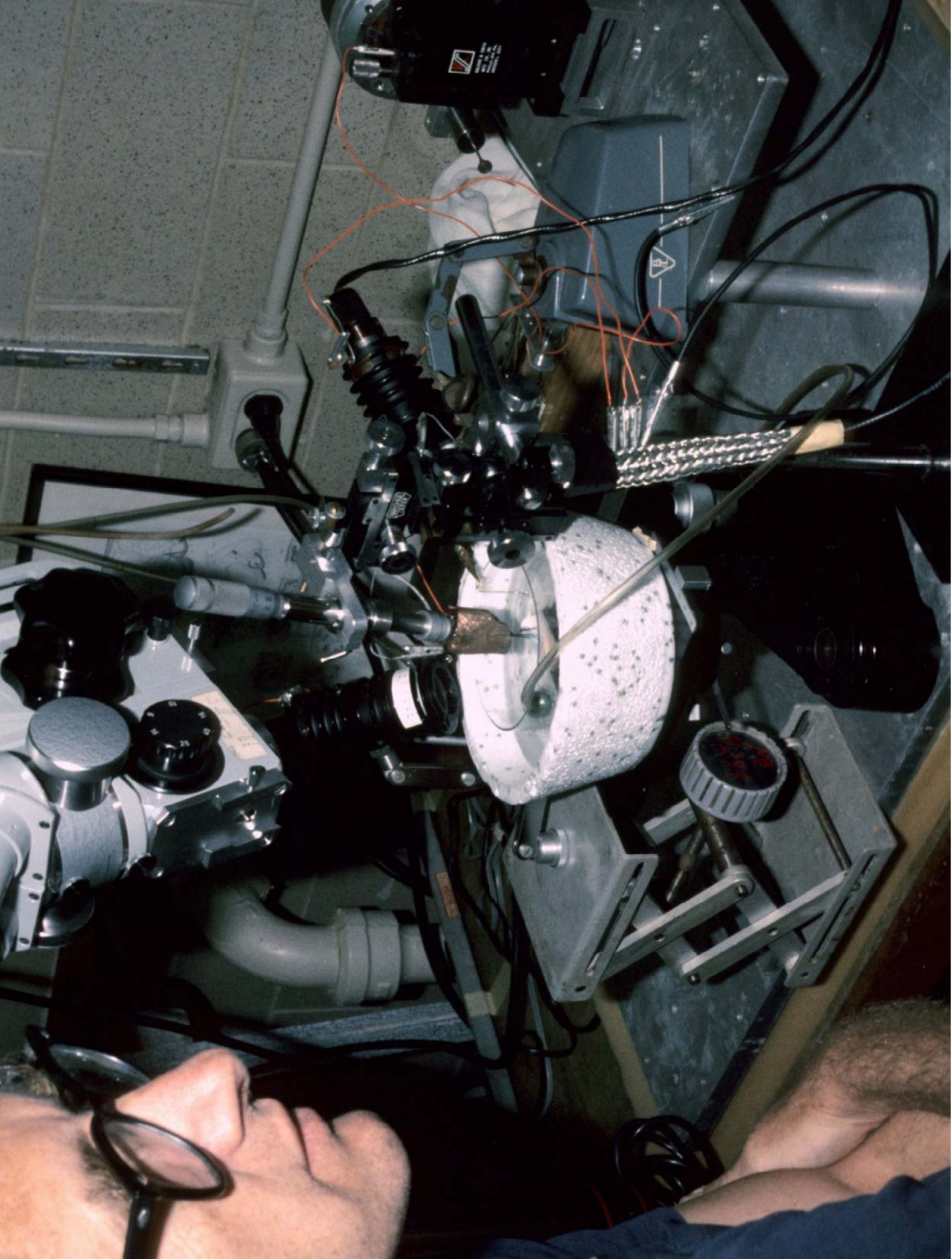
*John Allum Endicott House July 1970*



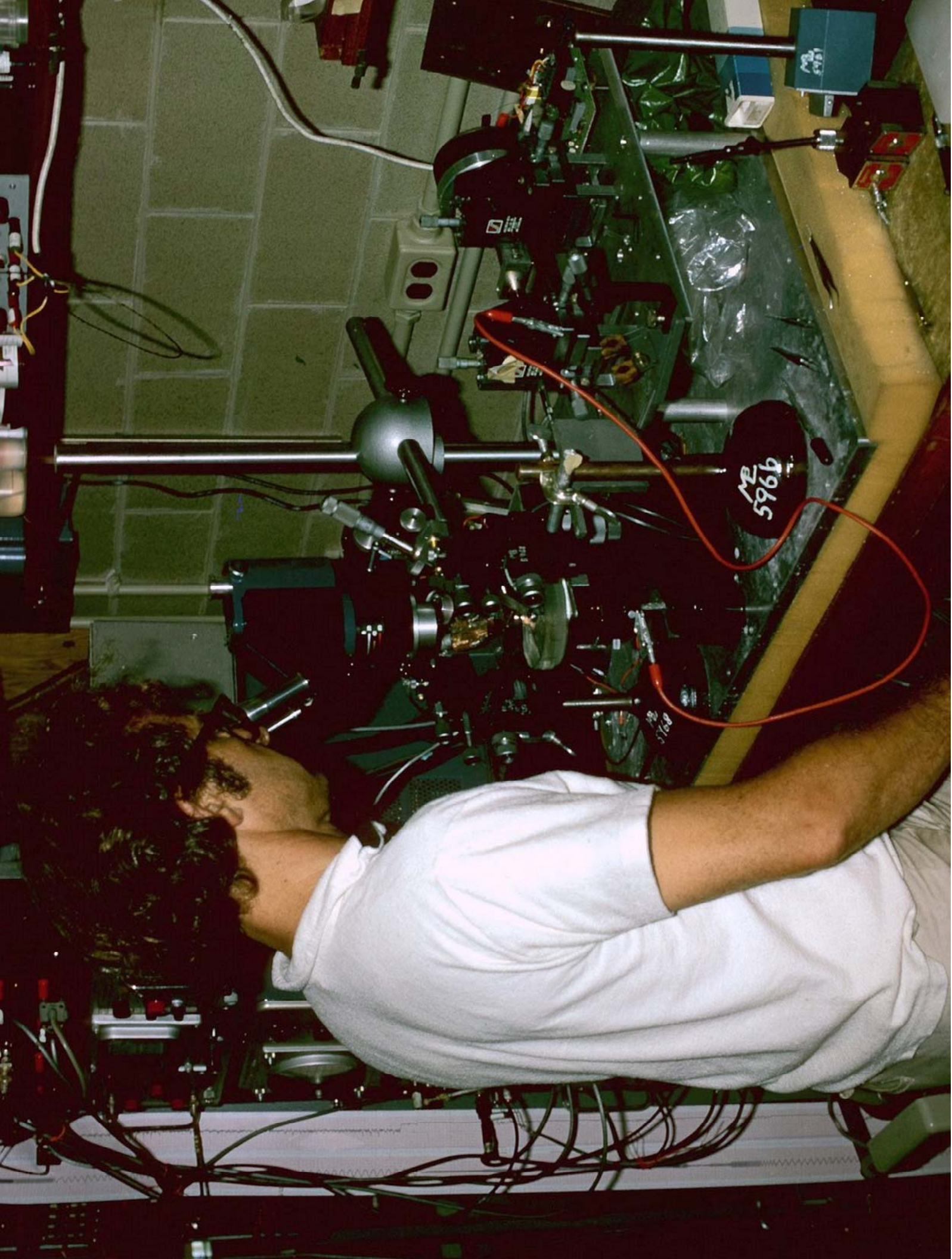
Larry Young, Ren Curry and Dick Battin, Endicott House July 1970



Eli Gai and Adage Flight Simulator, 1974



Larry Frishkopf - Skate semicircular canal experiments MIT-RLE December 1975



Marine Biological Lab Whitman 311 Lab Larry Frishkopf Summer 1974



Circularvection Experiment at NASA Langley: Chuck, Ralph Stone, Chuck Ormsby, Billy Ashworth, Johannes Dichgans and Larry Young 1972



MVL Picnic Softball: Bob Kenyon's Killers, victorious 1980

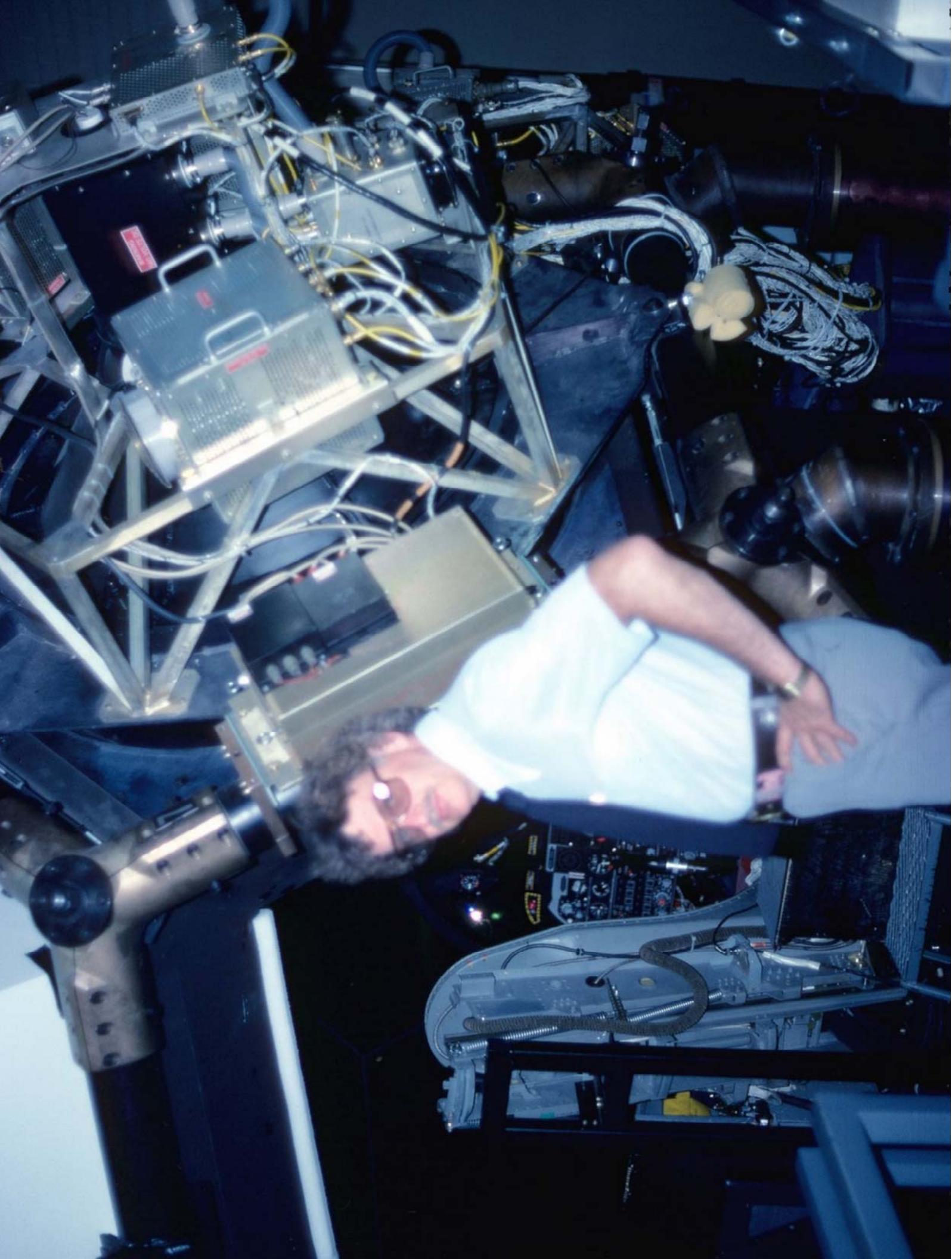




MVL Party in Winchester 1977: Sasha and Irina Efremov, Cherry, Brad and Kerry Campbell



*First USAF altitude chamber training, Pease AFB NH, 1978*



Williams AFB ASPT flight Simulator - Bob Kellogg May 1980



National Academy of Sciences Aspen CO summer study Aug 1977 Young, Oman, Reason, Wilson, Goldberg



*Chuck and Walter Cook with pallor monitor, 1982*



MERBOLD

PARKER

YOUNG · SHAW

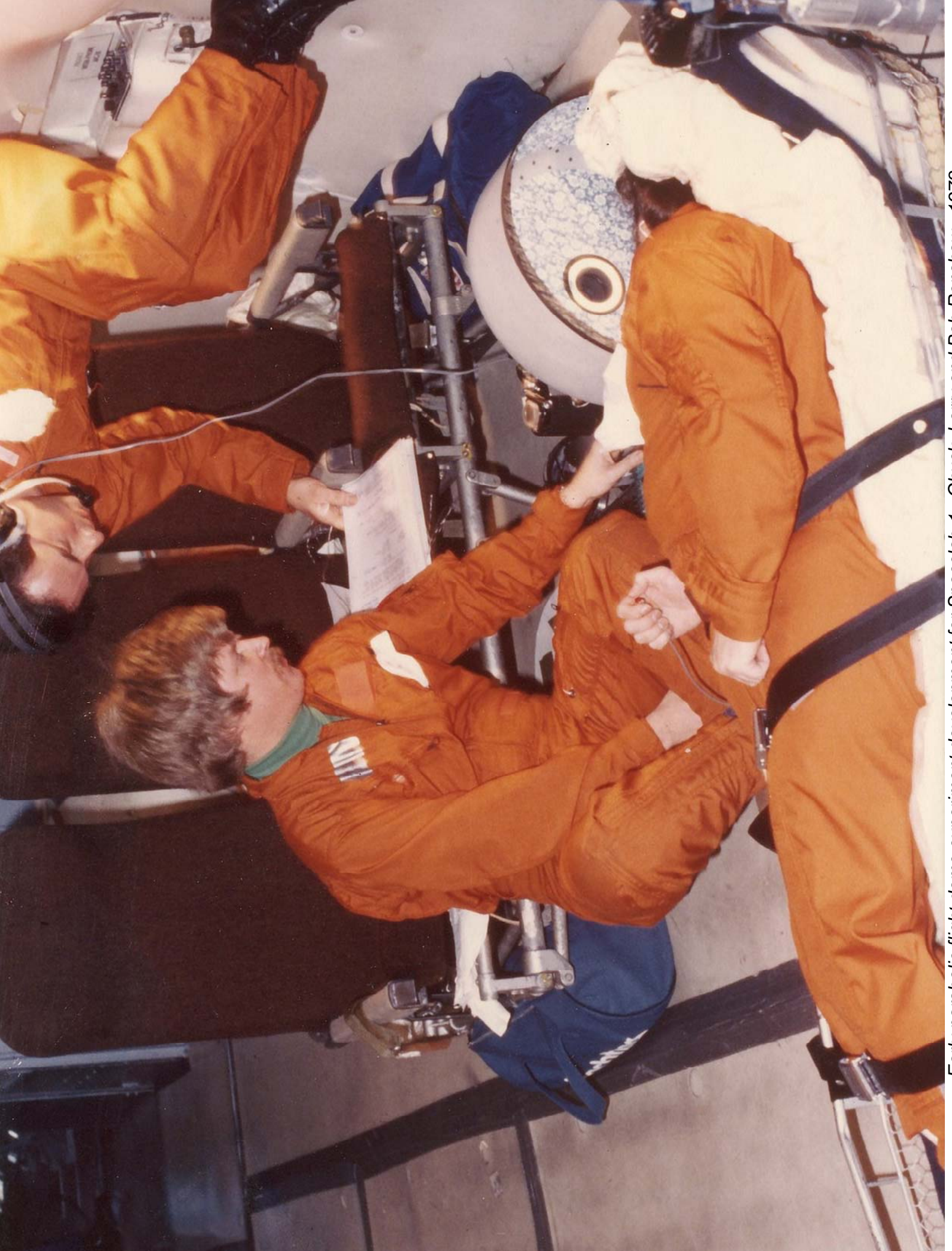
GARRIOTT

LICHTENBERG

Columbia · SpaceLab 1



*Bill Thornton STS-8 wearing Chuck's pallor monitor 1985*



Early parabolic flight dome experiment development for Spacelab-1. Chuck, Larry and Bob Renshaw. 1978





Former CSR astronaut and NASA MS Jeff Hoffman - early zero-g experience with MIT team 1978



Spacelab-1 Investigators Working Group Huntsville, 1979



*Spacelab E201 Principal Investigator Rudolph (Yuri) J. Von Baumbarten*



Spacelab-1 MS Bob Parker and MVL's Kerry Campbell - motion sickness training with prism goggles



John Tole, Mike Lampton and Bill Spacelab-1 vestibular testing 1979



*Bill Bock, Spacelab-1 Crew Training Coordinator - misery sailing to Great Misery Island picnic 1979*



*Wubbo Ockels teaching Chuck sailboard basics Huntsville, 1983*



Chuck and Doug in Wubbo Ockel's pool after Spacelab-1 Nikon camera training session, Huntsville 1981





Doug Watt testing Spacelab-1 Hop&Drop experiment procedures, 1980



Doug Watt testing hop & drop in the "playpen" - 1980



*Chuck, 1979*



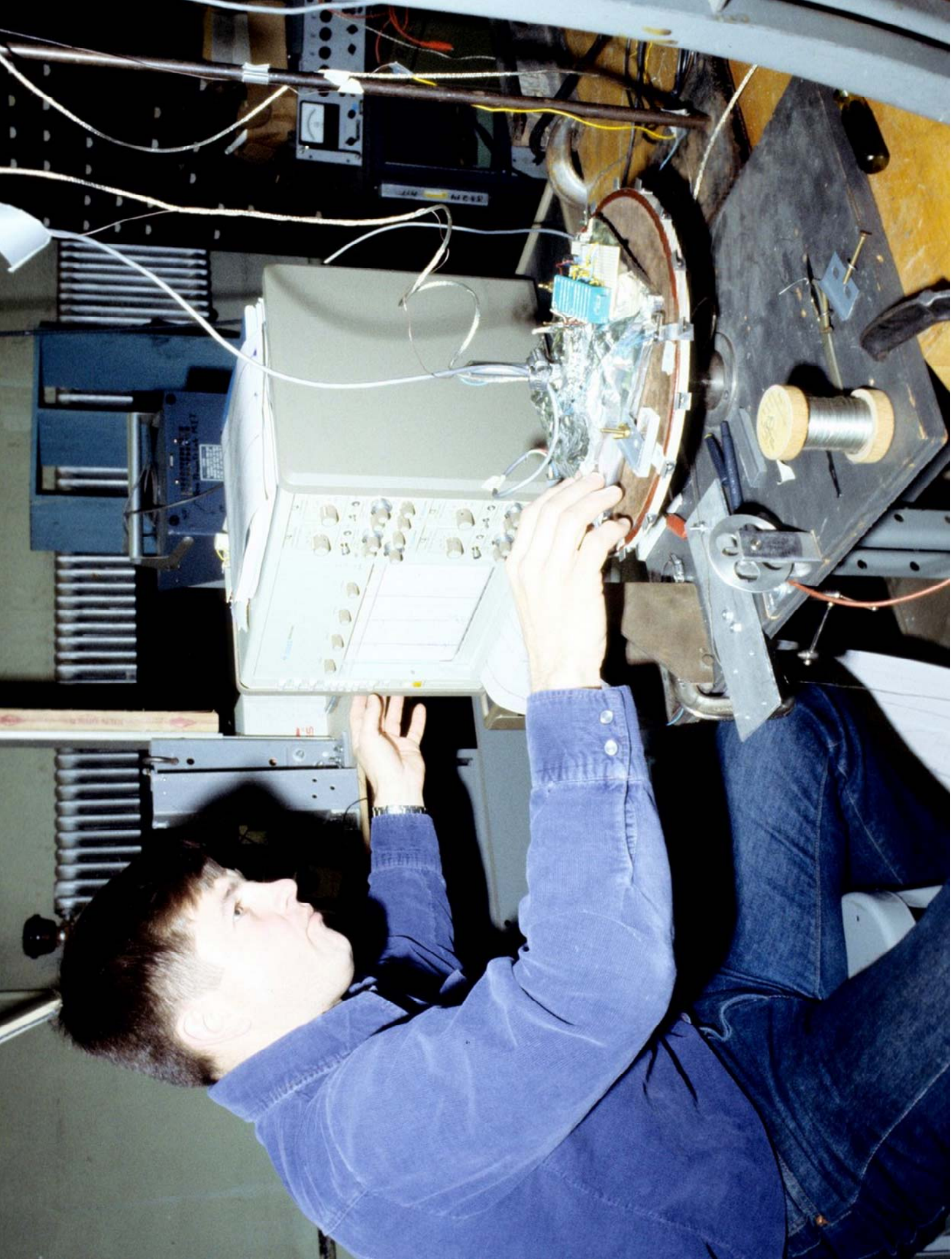
Spacelab - 1 KC-135 dome prototype test. Chuck and Anthony Arrott, 1980



*Byron Lichtenberg and Larry Young testing Spacelab-1 Dome prototype 1979*



Mark Shelhamer Spacelab-1 Dome experiment development 1979



Ken Cameron's fluidic angular accelerometer - XVI De Florez award winner, 1978



Toronto DCIEM Spacelab-1 PAM motion sickness susceptibility test, Feb 1979 Chuck (before)





Same test, Chuck after 6 minutes.



*Skylab/Spacelab MS Owen Garriott, prism goggle motion sickness symptom recognition training MIT Feb 1979*



ESA Medilog experiment investigators Frank Stott and Harry Green, Stirling, Scotland Sept 1981





*Wubbo Ockels, MVL 1979*



*CSR Associate Director Joe Binsack, about 1980*



Chuck testing head mounted accelerometer unit, MSFC, April 1981



*Is one way to reduce space sickness to limit head movements ?*





Spacelab-1 crew training MIT 1983 Oman, Cook, Lichtenberg, Diamandis, Massoumnia



SpaceLab-1 pre- and postflight angular VOR & dumping testing DFRC 1983



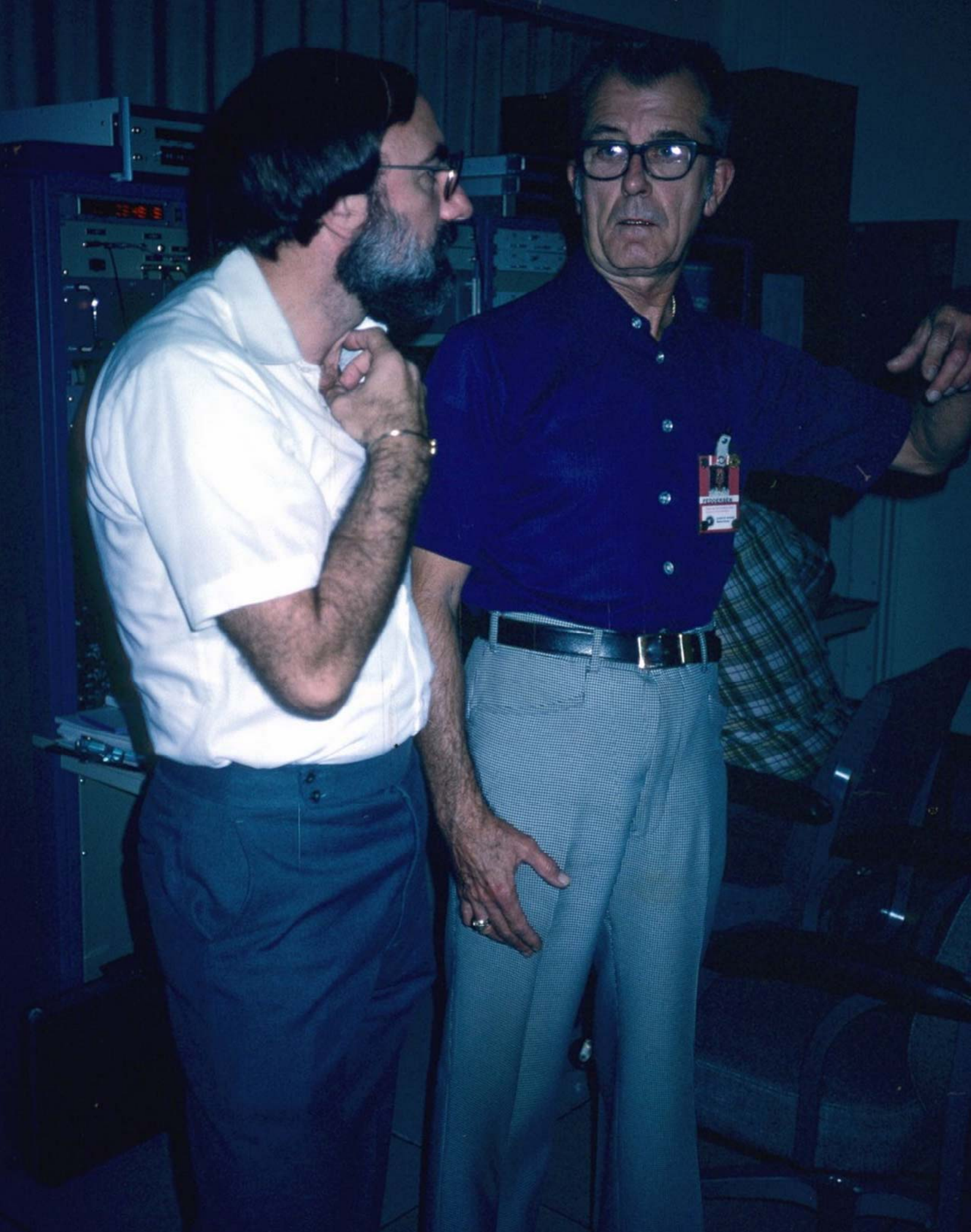
Kevin Johnson and Jim Gidney - built BDCF rotating chair in MIT undergrad project lab. Used on 4 Spacelabs



Spacelab-1 Integrated Mission Simulation at Huntsville, summer 1983



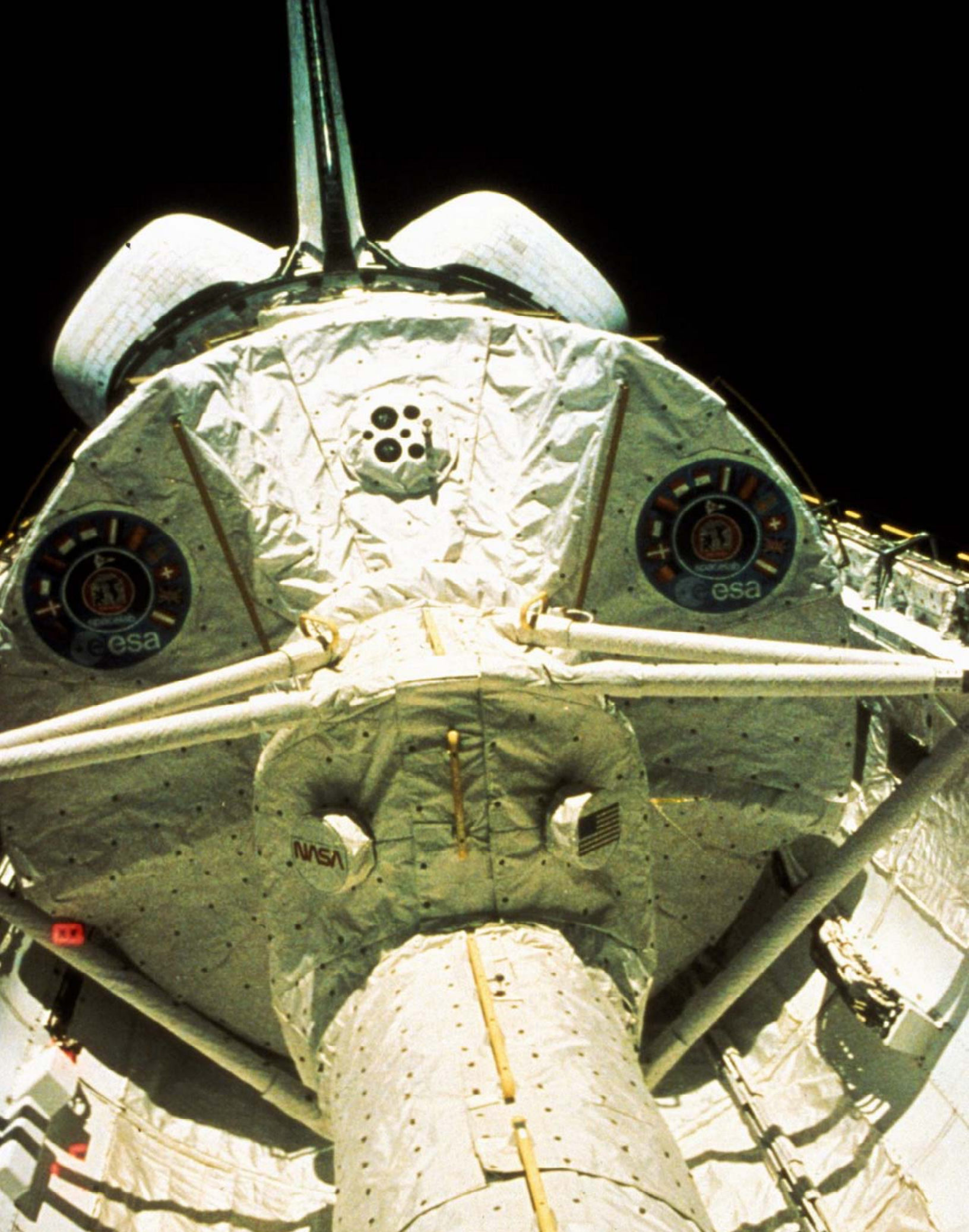
Spacelab Mission Sequence Test, August 1981



*John Rummel and Bill Feddersen, JSC Sept 1983*



Ulf Merbold and Byron Lichtenberg - the first Shuttle Payload Specialists



*After 7 years of planning, Spacelab 1 flew in December 1983*





*Byron Lichtenberg, Wearing Chuck's ARU*



*Byron made extensive notes on sickness and orientation illusions*



Spacelab-1 JSC Science Monitoring Area Experiment 102 console, Chuck, Doug Watt and Larry Young December 1983



View from 102 console



Spacelab 1 Science Operations Planning Group, December 1983





Spacelab-1 JSC Science Monitoring Area E104 Console - Mill Reschke



E102 Console Doug Watt, Larry Young, Paul Craven November 1985





*Spacelab pre/postflight vestibular sled testing - Owen Garrott wearubg biteboard, EOG electrodes, and helmet shroud Aug 1983*



Crew returns to JSC - Shelhamer, Lichtenberg, Deb Harm, and Jim Evans



Larry Young, Ron White, Mel Buderer, and Gloria Salinas



SpaceLab-1 postflight at DFRC Dec 1983



Columbia preparing to return from Dryden to Kennedy. Lena Tomi, Doug Watt, Helen Scott, Owen Garriott & Chuck Oman



*Byron is a NASA Payload Specialist, but gets his USAF Astronaut Wings*



IN OFFICE USE ONLY  
U. S. GOVERNMENT  
INTERAGENCY MOTOR POOL  
271

*Slacelab-1 landing, DFRC. Alan Benson, looking for Columbia*



Spacelab-1 Pre & Postflight Rotating Chair VOR and Dumping Tests 1985





*Final Spacelab-1 Postflight Data Collection. Watt, Young, Oman & Money. MIT & McGill flags flying.*



Spacelab D-1 crew training Oman, Furrer, Messerschmid, Arrott 1984



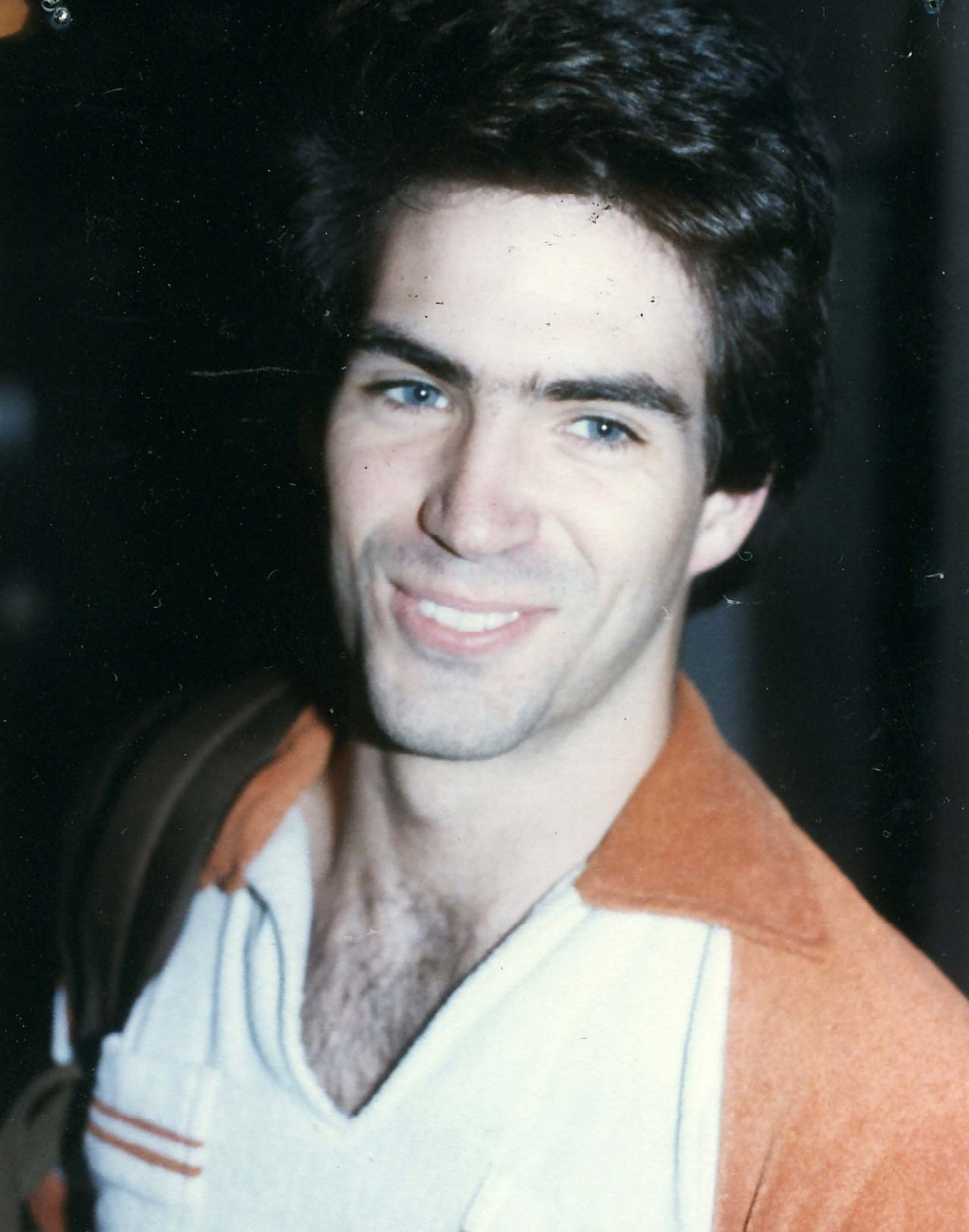
Spacelab SLS-1 VRI experiments 1984 Phillips, Fulford, Gaffney, Watt, Oman, Williams



*Motion sickness reporting training 1984*



Walt Cook, Peter Diamandis and Otmar Bock MVL 1985



*Brian Rague Electrogastrography Spectral Analysis September 1985*

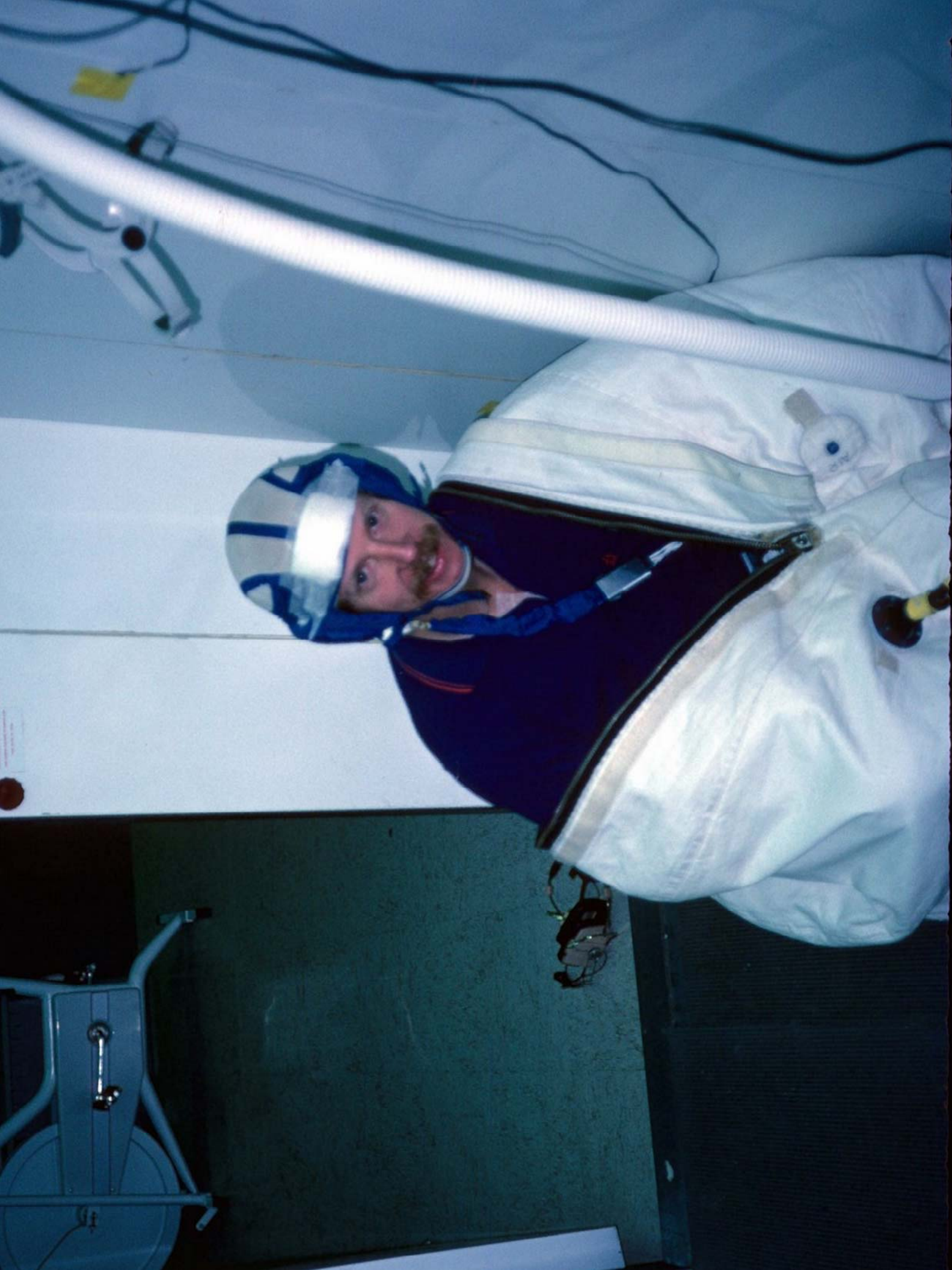


Bob McCoy Spacelab-1 ARU Analysis 1985

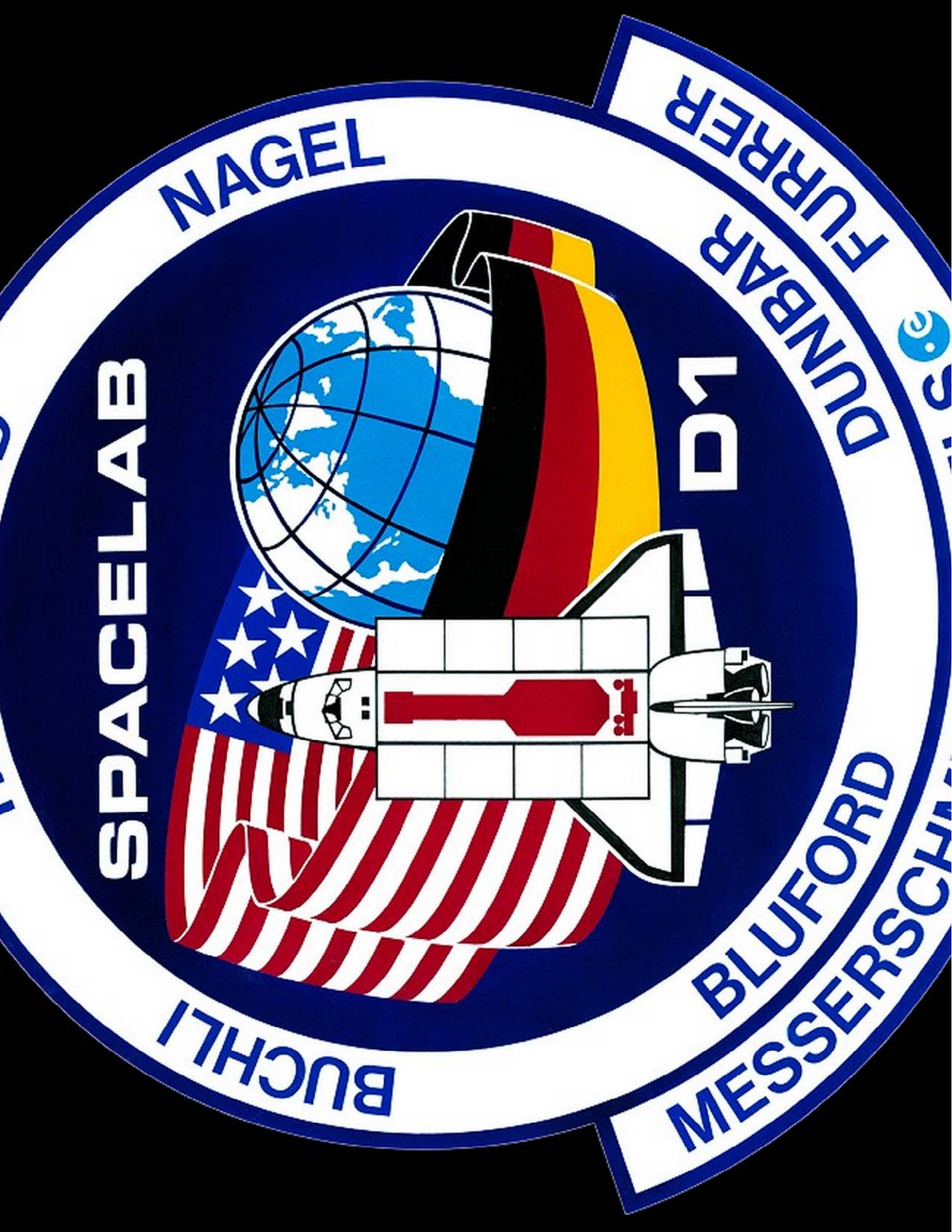


NASA Class II spaceflight physical JSC 1983





NASA Payload Specialist claustrophobia test 1983



NAGEL

FURRER  
DUNBAR

LO1

BLUFORD

MESSERSCHMIDT

BUCHLI

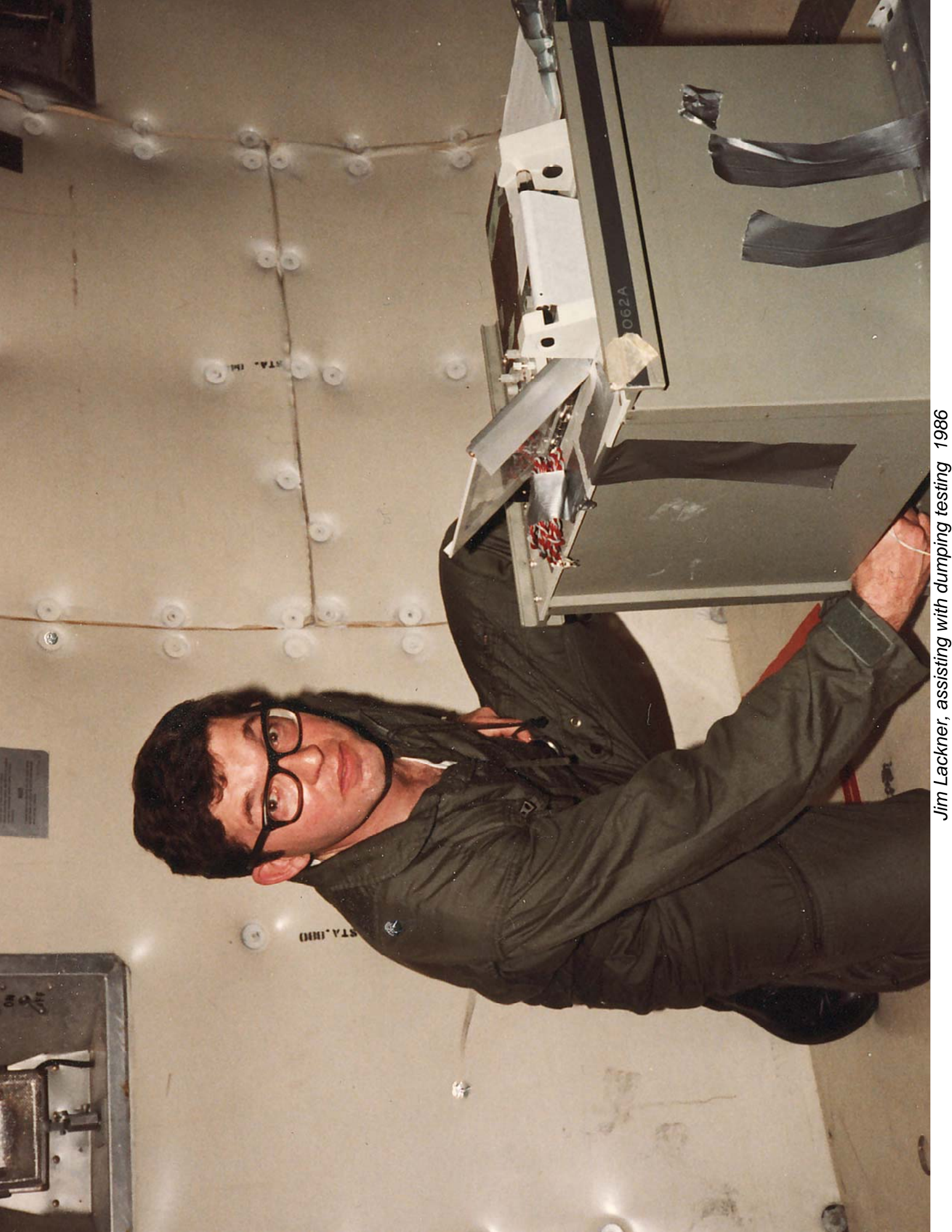
SPACELAB



Larry and Doug free spinning Chuck, 1999. Conclusion: to test VOR we will need a rotating chair



*Chuck testing Spacelab 4 Dumping Protocol, 1986*



Jim Lackner, assisting with dumping testing 1986











ALT Shuttle Enterprise at DFRC, November 1985



Spacelab D-1 ARU training at JSC, Sept 1985



Mark Shelhamer at Ellington Hangar, summer 1984

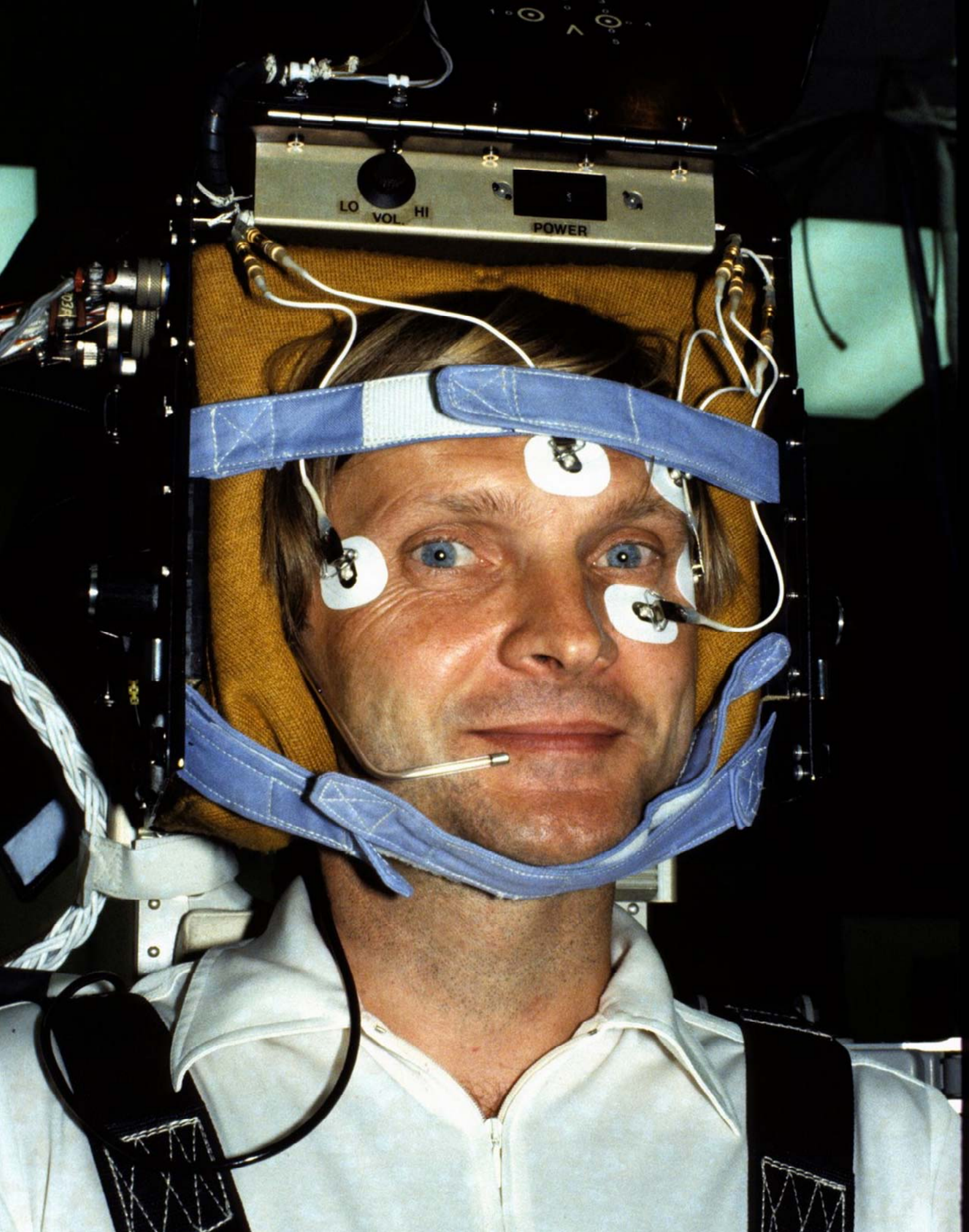


M.I.T.  
MAN VEHICLE  
LABORATORY  
SPACELAB

D-1 MISSION  
VESTIBULAR SCHÜTTE

MIT  
OMAY  
NASA  
John F. Kennedy Space Center

*Chuck at KSC, November 1995*



*Ernst Messerschmid in ESA Space Sled, DFVLR training in Porz-Wahn, Germany Feb 1984*



Bob Renshaw Spacelab D-1 Integrated Simulation, November 1985



Renshaw and Young Space Sled Training Porz Wahn Germany Sept 1984



Science Monitoring Area, JSC 1985





1220  
COCOA BEACH  
TOWERS

Sherry Modestino's condo in Cocoa Beach - MVL Hq for D-1 mission 1985



NASA ground sled at DFRC Spacelab D-1 1985



Do Dorothy Spangenberg's tiny jellyfish orient to gravity ? 1984



SpaceLab D-1 KC-135 testing at DFRC November 1985



Spacelab D-1 Postflight Baseline Data Collection Party, Kennedy Space Center November 1985



*Ilya Shubentsov Spacelab-1 & D-1 head movement analysis*



*Mark Kulbaski Spacelab SLS-1 rotating chair analysis 1986*



*Bin An Subjective Vertical Experiments 1988*





MVL Picnic June 1986 - Young's Yankees, victorious (for once)



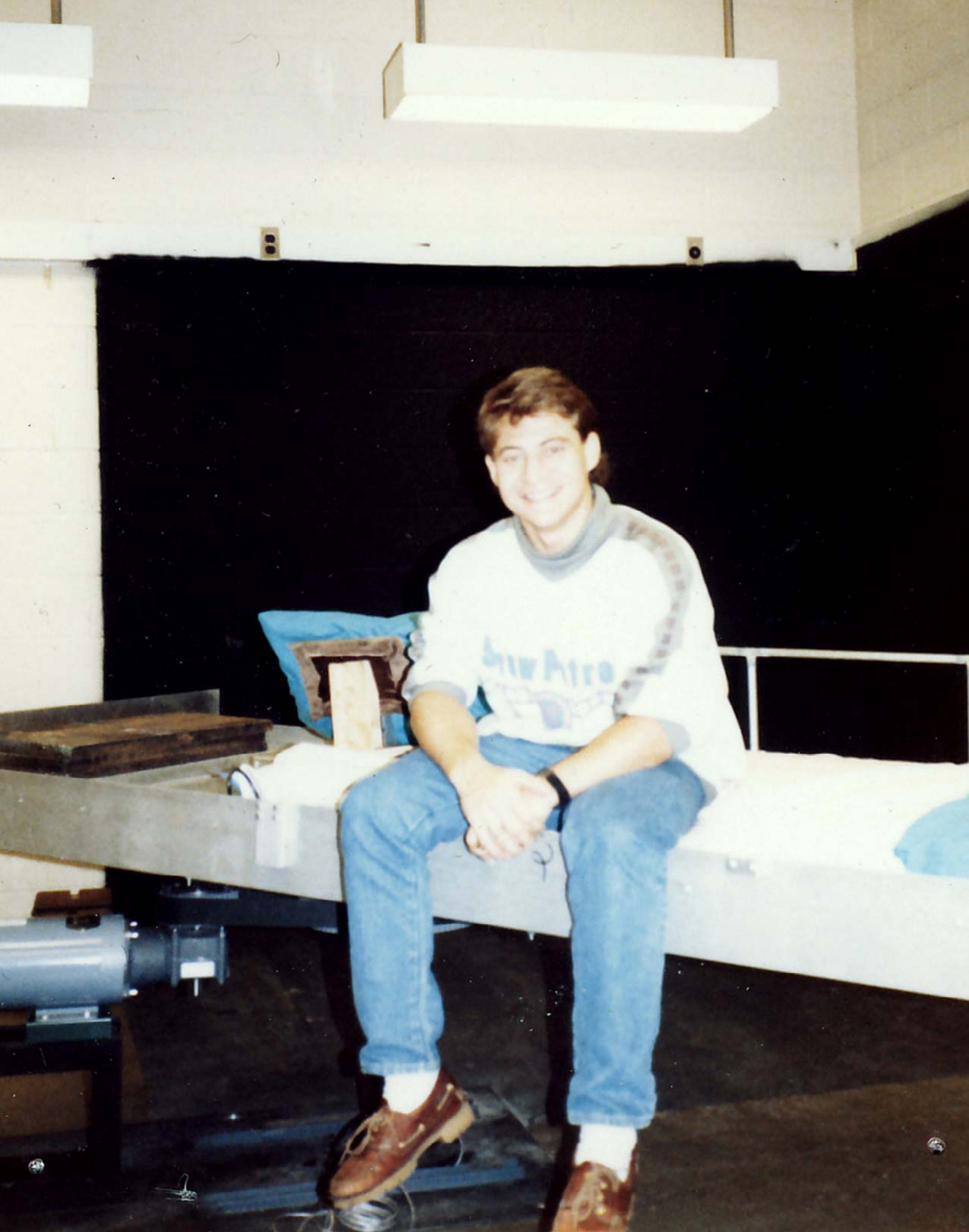
*Chris Eagon HST MD MVL Electrogastrography Research*



*Sherry Modestino, MVL's Administrative Officer and Computer Systems manager*



*Peter Diamandis 1985*



*Peter Diamandis's Artificial Gravity Sleeper 1986*



*Divya Chandra 1987*

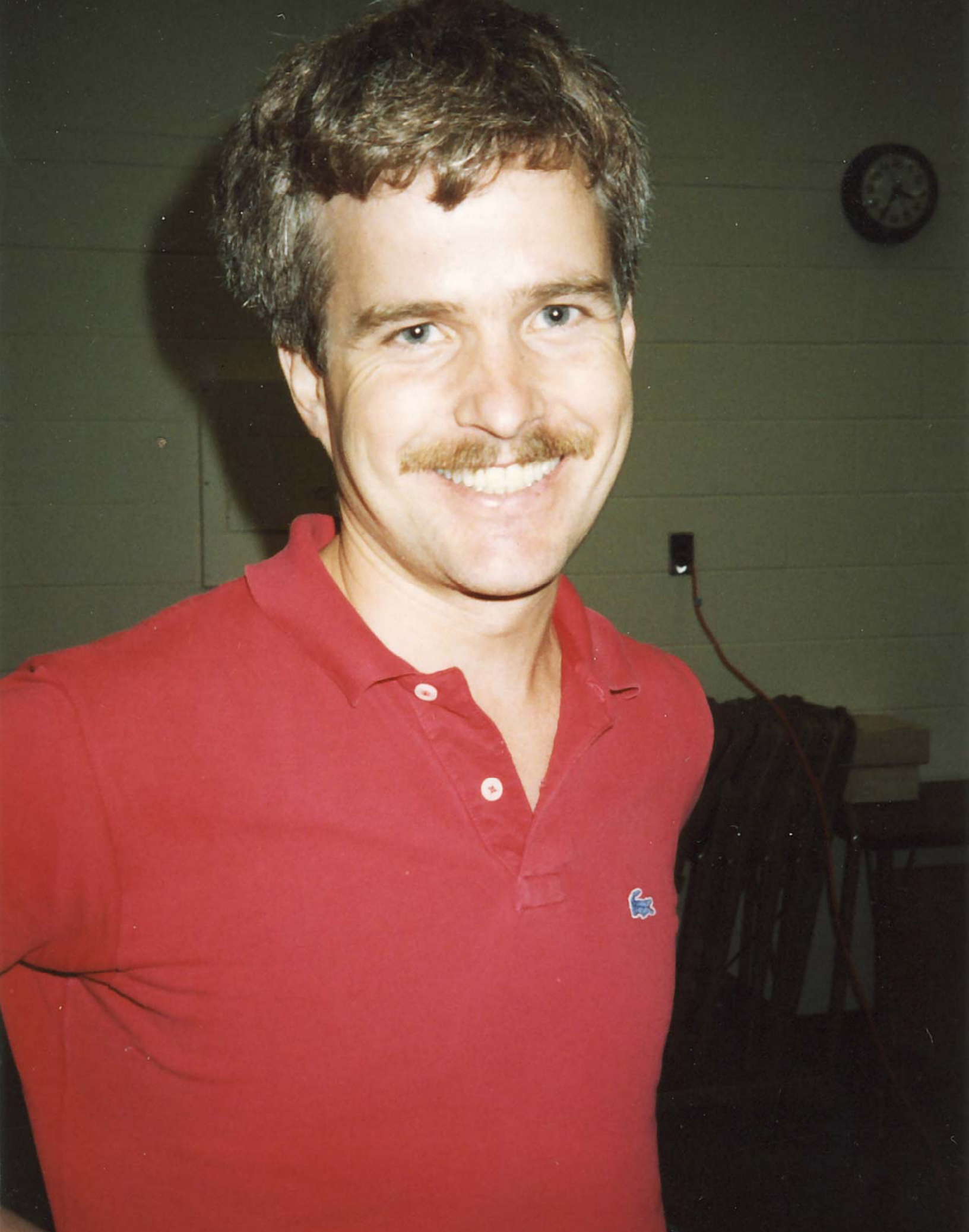


MIT Telescience Team, July 1988 Renshaw, Modestino, Glas, Shelhamer, Oman, Mullen. Shubentsov, Lichtenberg, McGrath



MVL Secretary Barbara Glas and Byron Lichtenberg, Telescience 1989

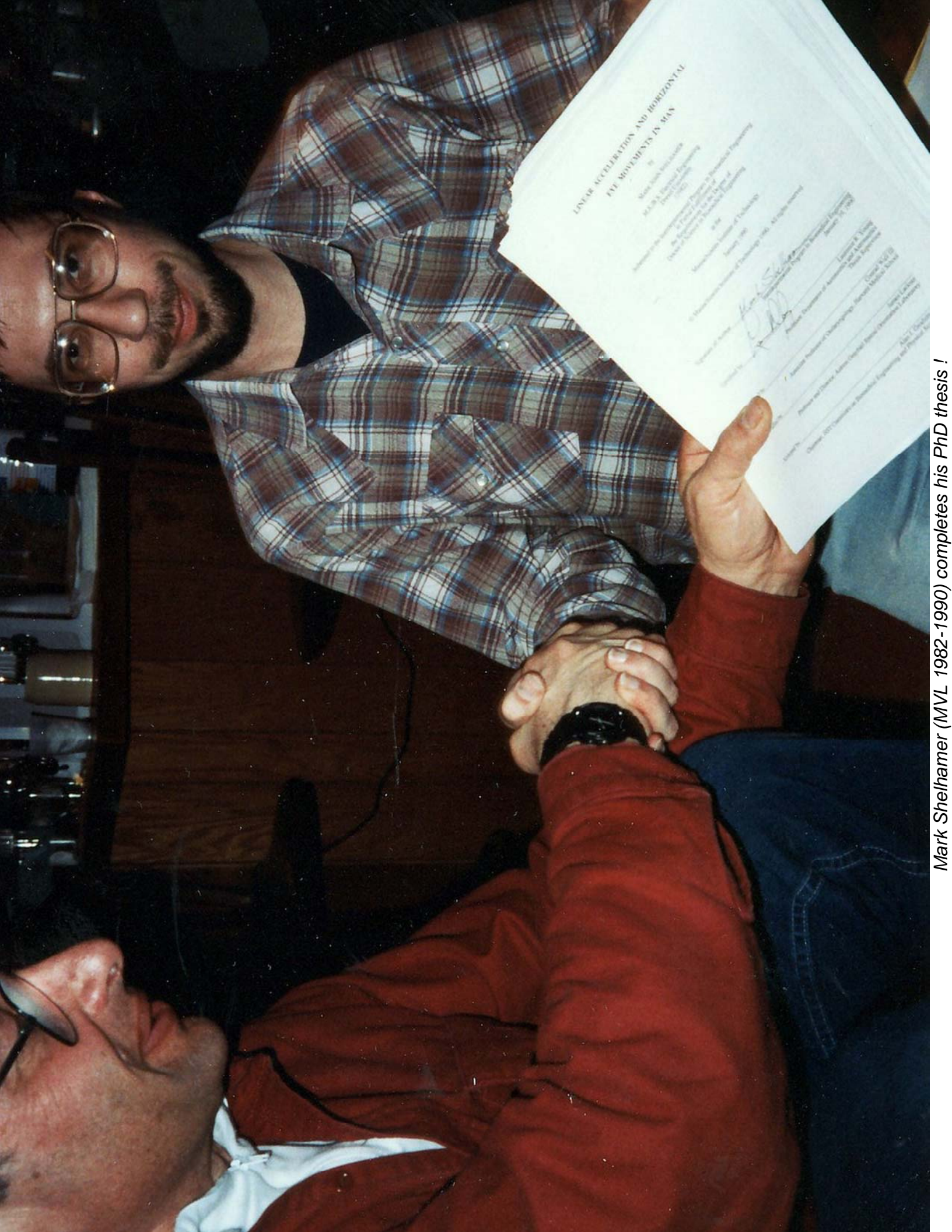




*Sandy Alexander 1989*



Ruud Hosman and Chuck August 1988



Mark Shelhamer (MVL 1982-1990) completes his PhD thesis!



MVL February 1990



40

BAGIAN FULLFORD

JERNIGAN GUTIERREZ

SPACELAB LIFE SCIENCES 1

O'CONNOR

SEDDON

GAFFNEY HUGHES

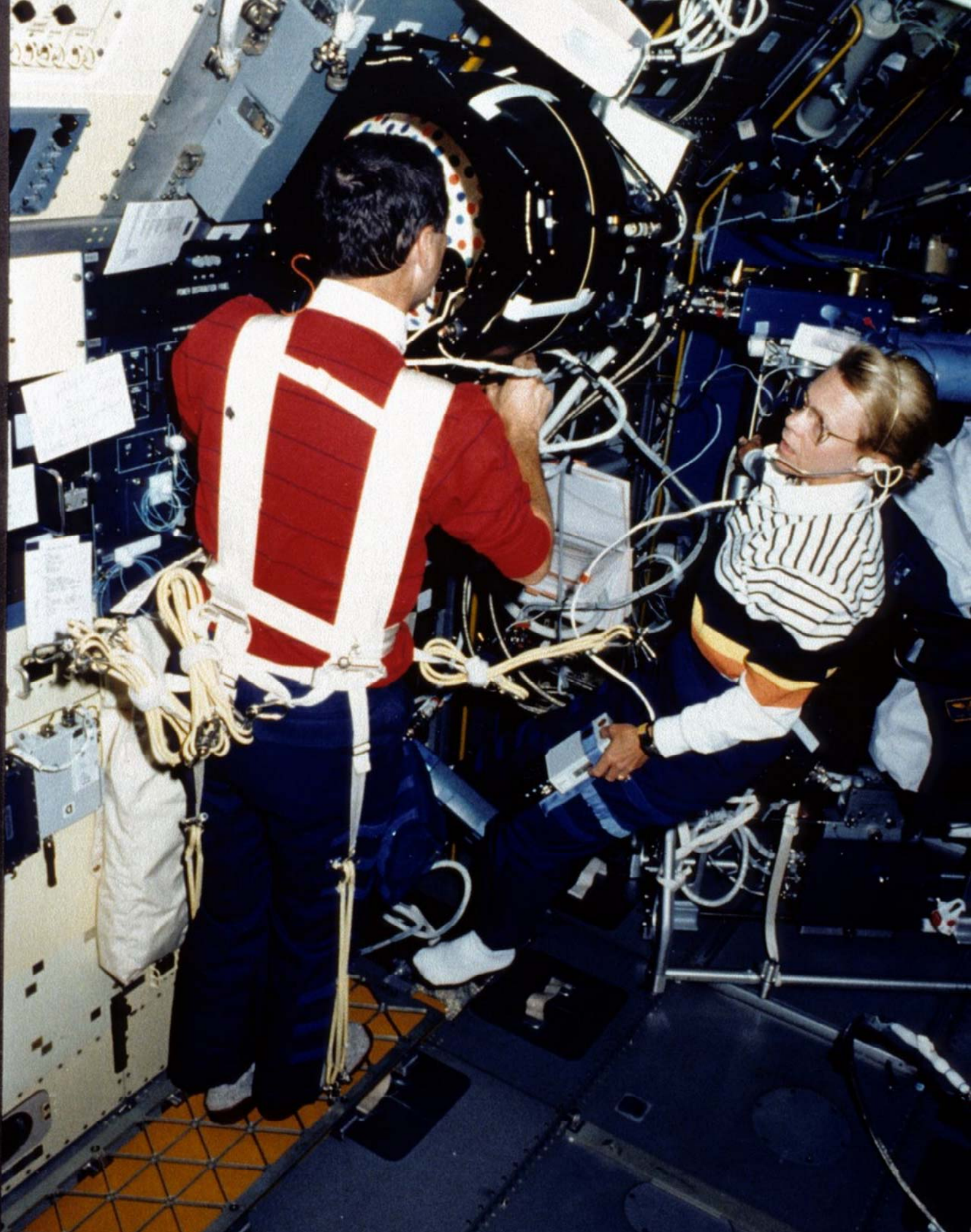
STS



Spacelab SL-4 Hop and Drop tests Fulford, Watt, & Tomi Nov 1984



Spacelab 4 parabolic flight crew training 1984 Salinas, Young, Fulford, Williams, Gaffney



*Drew Gaffney and Rhea Seddon SLS-1 Dome Experiment, 1991*





Bob Phillips and Millie Fulford training on SLS-1 rotating chair experiment at JSC 1985



NASA Sled at DFRC BDCF 1991 Johnston, Law, Fulford, Merfeld, Young



*Spacelab SLS-1 NASA EPE Vanessa Ellerbe and EPS Stuart Johnston*



*Al Shaw, XVI Senior Technical Instructor 1986*



SLS-1 postflight data collection



Barany Meeting Prague 1992



Dan Merfeld, PhD 1994



MERBOLD

HILLMERS THAGARD

IML-1

OSWALTD  
READDY GRABE

BONDAR





Scott Wood and Paul DiZio testing IML-1 Rotating Chair 1993



IML-1 PS Roberta Bondar & Chuck - occupational hazard of parabolic flight



Wally Zulecz IML-1 KC135 flight 1993



International Microgravity Laboratory 1 IWG 1992



IML-1 Microgravity Vestibular Investigations console - Harm, Better, Kalla, Doxey 1993



Owen Black, Fred Guedry and Mill Reschke IML-1 BDC DFRC 1993



Gilles Clement, Alain Berthoz and Don Parker IML-1 DFRC BDC 1993



4809





Neurophysiology Lab administrator Elissa Allen IML-1 1993



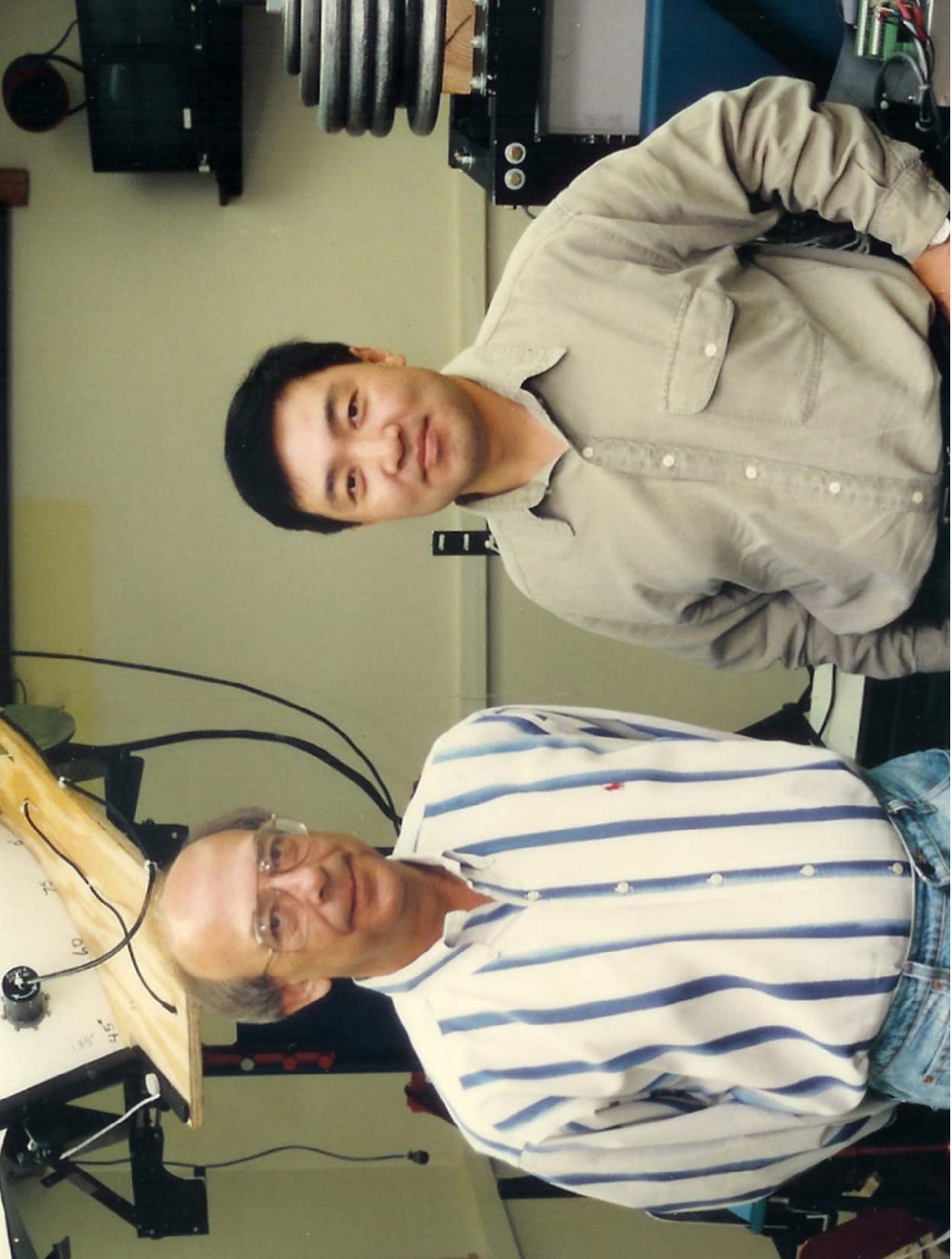
Fred Guedry and Jim Vanderploeg IML-1 BDC 1993



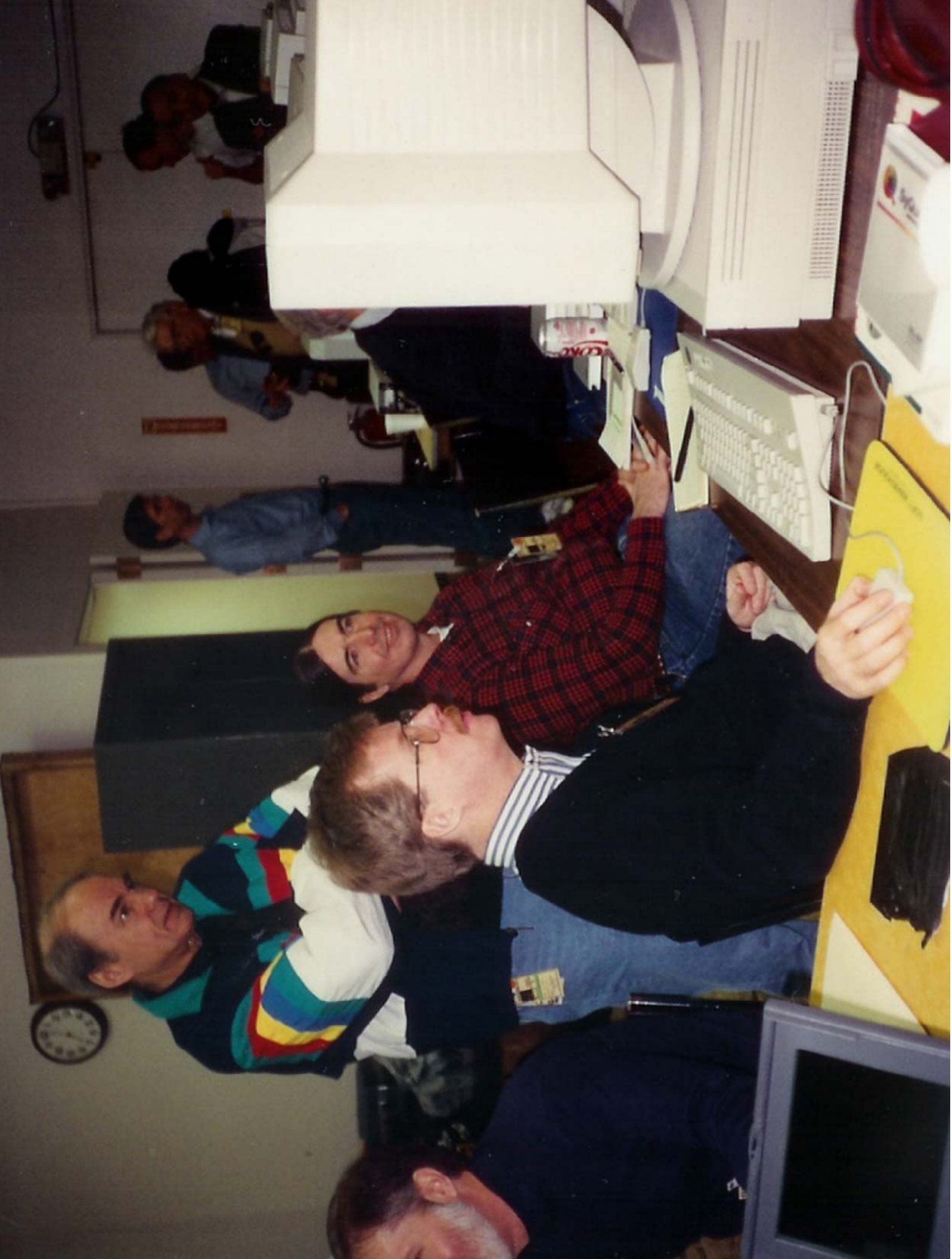
Jim Lackner, Geoffrey Melvill Jones, Makoto Igarashi, Mill Reschke



Makoto Igarashi, Geoffrey Melvill Jones, Mill Reschke 1993



Mill Reschke and KJ Sung at JSC IML-1 1993



Dick Calkins, Ralph Jell, Chuck, Wally Kulecz IML-1 Science Monitoring Area 1993



Mill Reschke, IML-1 MVK Principal Investigator



Owen Black and Bill Paloski IML-1 BDC 1993



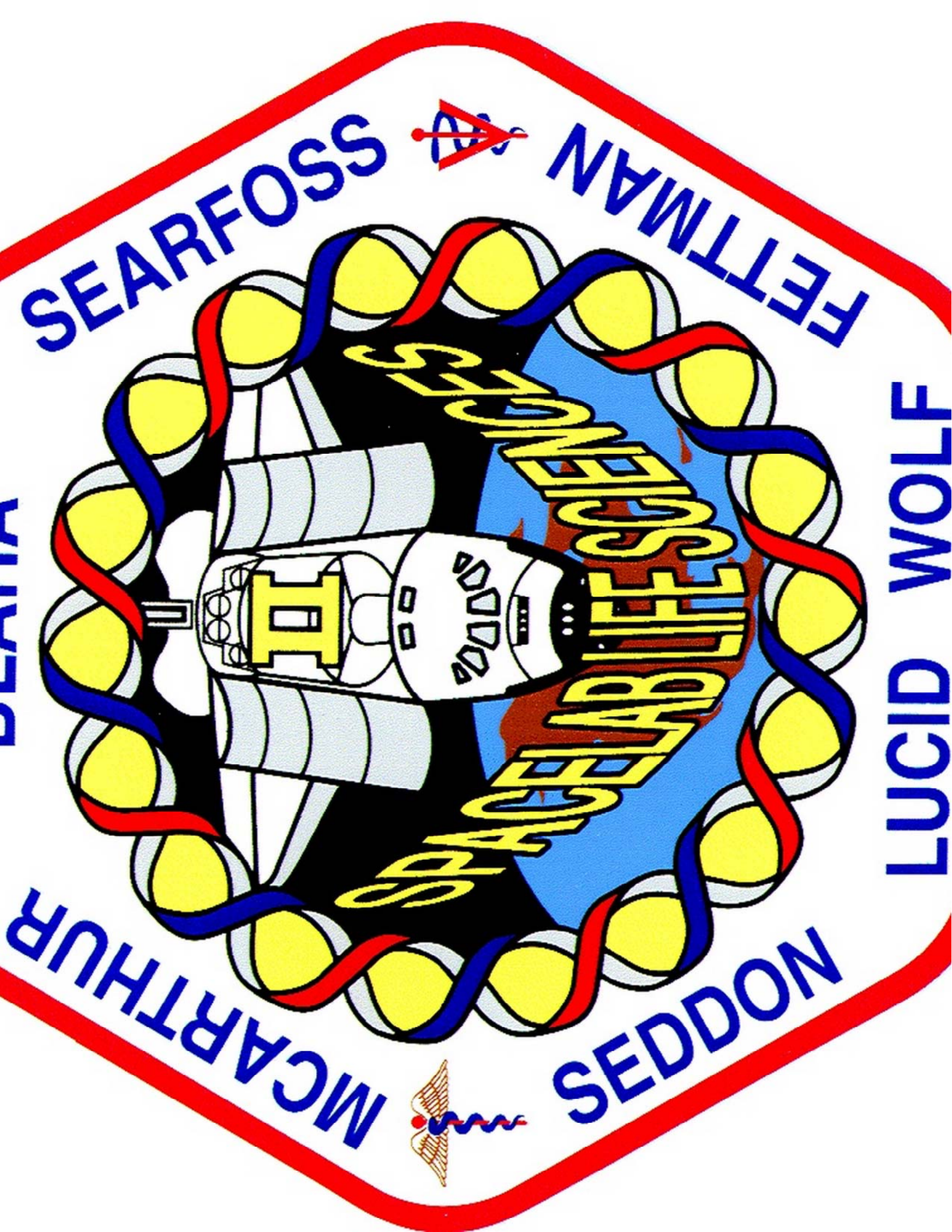




*Bill Paloski, Owen Black, Mill Reschke and Jacob Bloomberg*



Gilles Clement, Chiaki Mukai, Mill Reschke, Deb Harm, Jacob Bloomberg JSC Neurophysiology Lab



SEARFOSS

FETTMAN

LUCID WOLF

SPACE ABILITY SCIENCE

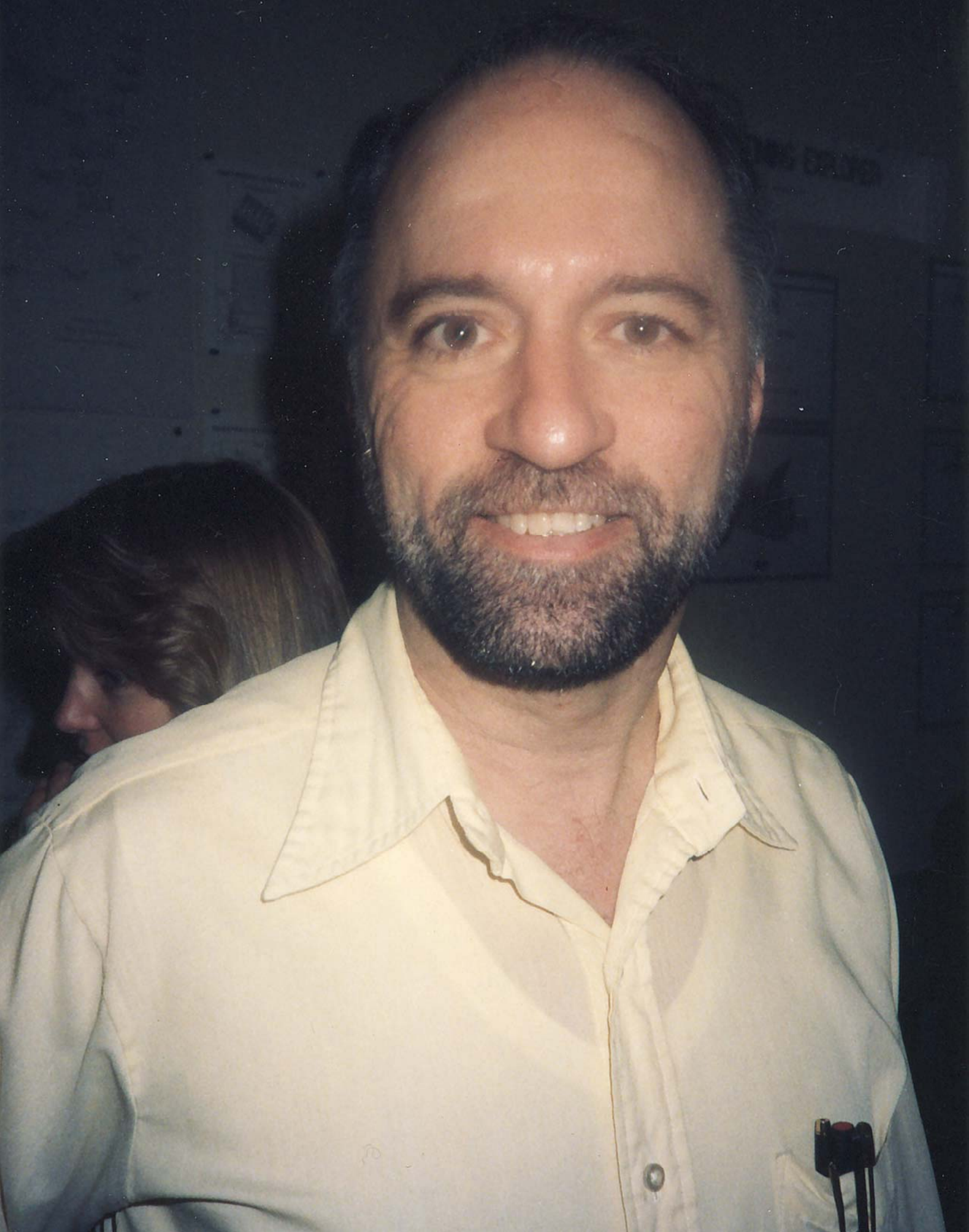
MCCARTHUR

NOODDES





*Kim Tseko MVL Secretary 1992*



*Lyman Hazelton Spacelab SLS-1 PI-in-a-Box experiment*

# TEMPORARY

NAME

YOUNG, LAWRENCE R.

REPRESENTING

MASSACHUSETTS  
INSTITUTE OF TEXAS

EXPIRES

2/22/92

AUTH  
ENTE

36,266







SLS-2 rotating chair test - Chris Pouliot, John Blaha (only Shuttle CDR to do our experiments) and Chuck 1993



SLS-2 Crew Photo, including APSES Buckley and Young



SLS-2 DFRC BDC - Keoki Jackson fell while jogging in the high desert, broke both wrists



SLS-2 Postflight KC-135 testing 1993



Spacelab SLS-1 Rotating Chair Experiment Oct 1993 Marty Fettman and Rhea Seddon

April 1995

# AEROSPACE

A M E R I C A

A photograph of two astronauts in a spacecraft simulator. The astronaut on the left is wearing a blue flight suit with NASA and USA patches, a helmet, and goggles. He is holding a small electronic device. The astronaut on the right is also in a blue flight suit with a NASA patch and is wearing a headset. They are both looking towards the right side of the frame. The background shows the interior of a spacecraft simulator with various panels and equipment.

## Learning from living in space

**HSCT research gathers speed**

**Stretching the chances of battlefield survival**

Life  
Sciences  
& Space  
Medicine  
Exhibition '95

**SHOW GUIDE**



Dan Merfeld and Britt Walters - last SLS-2 postflight BDC 1993



George Lutz JSC Baseline Data Collection Facility (B266) manager 1993





SLS-2 postflight party 1993



*Valerie Bilien in ETC Gyrolab simulator - EKF modeling of Coriolis disorientation 1993*



Graybiel Symposium at USRA LPI Clear Lake October 1987



*Brad McGrath (MVL 1987-90), Fred Guedry and Angus Rupert NAMRL Pensacola Coriolis Acceleration Platform 1988*



# Vestibular Function

ISBAAVF

NASA

HKU

September 14-16, 1987 Hong Kong



Ted Smith with Volpe's Frasca 242 light twin simulator 1988



Steve Bussolari - MVL's newest IFR pilot 1985



MIT Dept of Aero Astro Faculty Retreat Vermont 1998





ESA NASA NASDA NIH NSF ONR

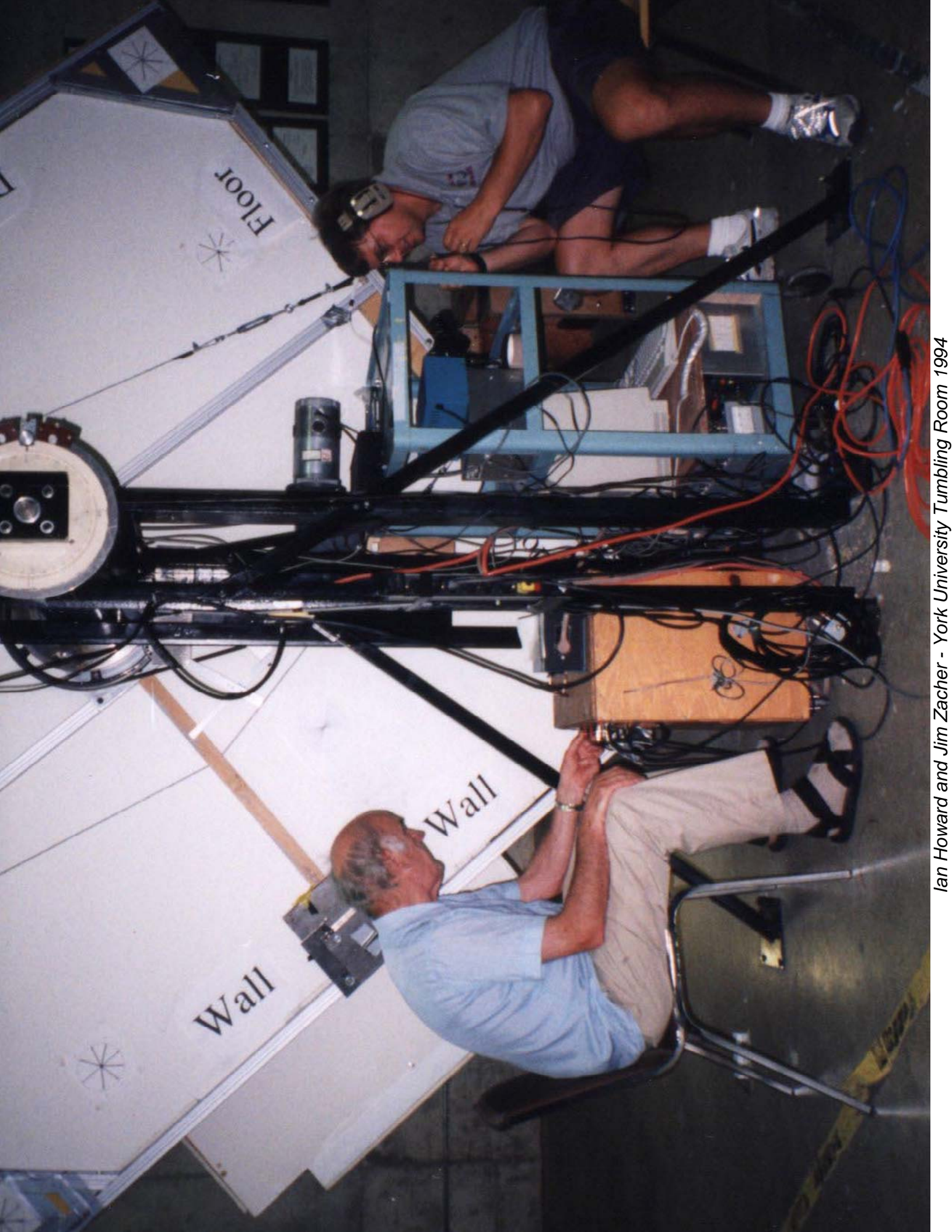
**NEUROLAB**

DARPA

CSA

CNES

OF THE BRAIN  
DECADE



Ian Howard and Jim Zacher - York University Tumbling Room 1994



Ojas Rege and Bob Renshaw - MVL's first VR system 1996



Karen Lawrence and Andy Beall testing VEG experiment restraining 1997



Neurolab VEG Experiment KC-135 1998



*Neurolab VEG Experiment Science Team on console 1998*



Ian Howard and Ted Smith - NeuroLab Science Monitoring Area 1998



Andy Beall, Heather Jenkin, Jim Zacher, Chuck Oman VEG console 1998



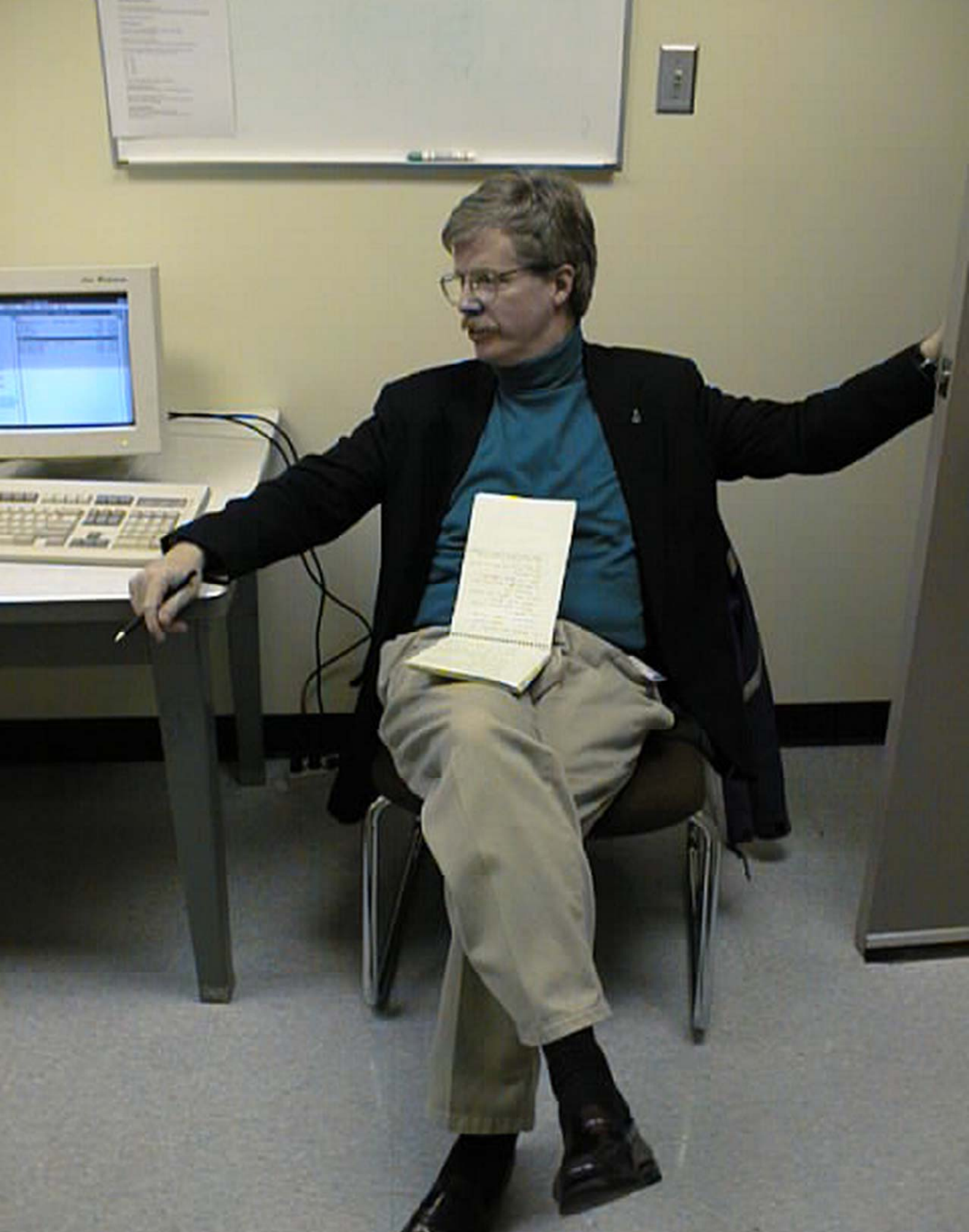


*Neurolab Science Monitoring Area - Stuart Johnston and Joe McIntyre 1998*



NeuroLab Kinelite Team 1998



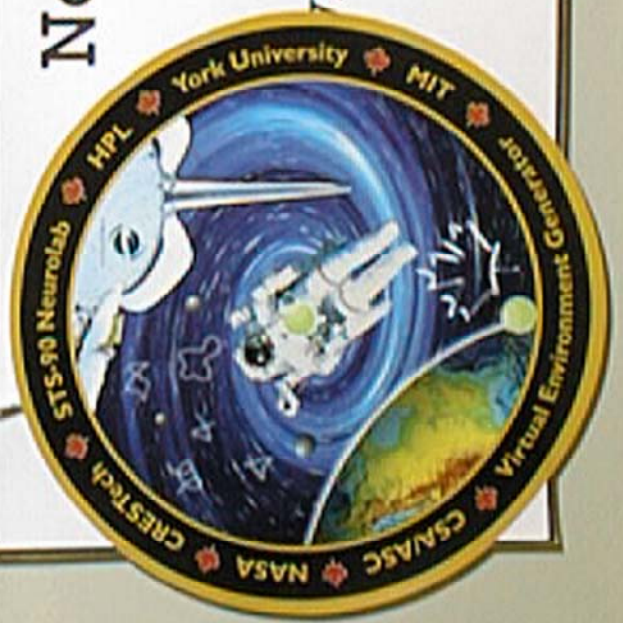


TEST ROOM #5

NeuroLab

E-136

MEG SESSION







Jay Buckley Neurolab preflight VEG tests 1998



Sometimes rebooting the VEG was an adventure





NeuroLab PIs in a box





Ian Howard in York Human Performance Lab dome



Andy testing VOILA HMD



Andy Beal testing Ian Howard's Mirrored Bed - York HPL 1997



Bill Hutchison - cockpit and rover Virtual Vision experiments



Hutch and Cherry at Hanscom airshow 2001



Alain Berthoz hosts ISS VOILA experiment (VEG-Kinelite extension) dinner - Paris 1999





Chuck and Cherry in Paris, 1999



MVL Picnic 1999



VOILA PDR at MIT: Bill Mayer, Andy Beall, Chuck, Ted Smith



Angie Lee, Andy Liu, Joe McIntyre, Andy Liu 1999



VOILA PDR Ben Sachtler, Mohammed Zahoui, Chuck, Joe McIntyre, Andy Beall



Chuck & Cherry, Sally and Walt Hollister, AeroAstro Holiday Party





Jon and Ian Clark - Arlington 2003





*Conrad Wall - NSBRI Associate Team Lead 1999-2003*



*Kathy Sienko*



Jason Richards - 3D spatial memory experiments 1999



NSBRI Visual Orientation Project 1998



NSBRI visual orientation project - York collaborators: Laurence Harris, Mike Jenkin, Jim Zacher, Heather Jenkin 1999

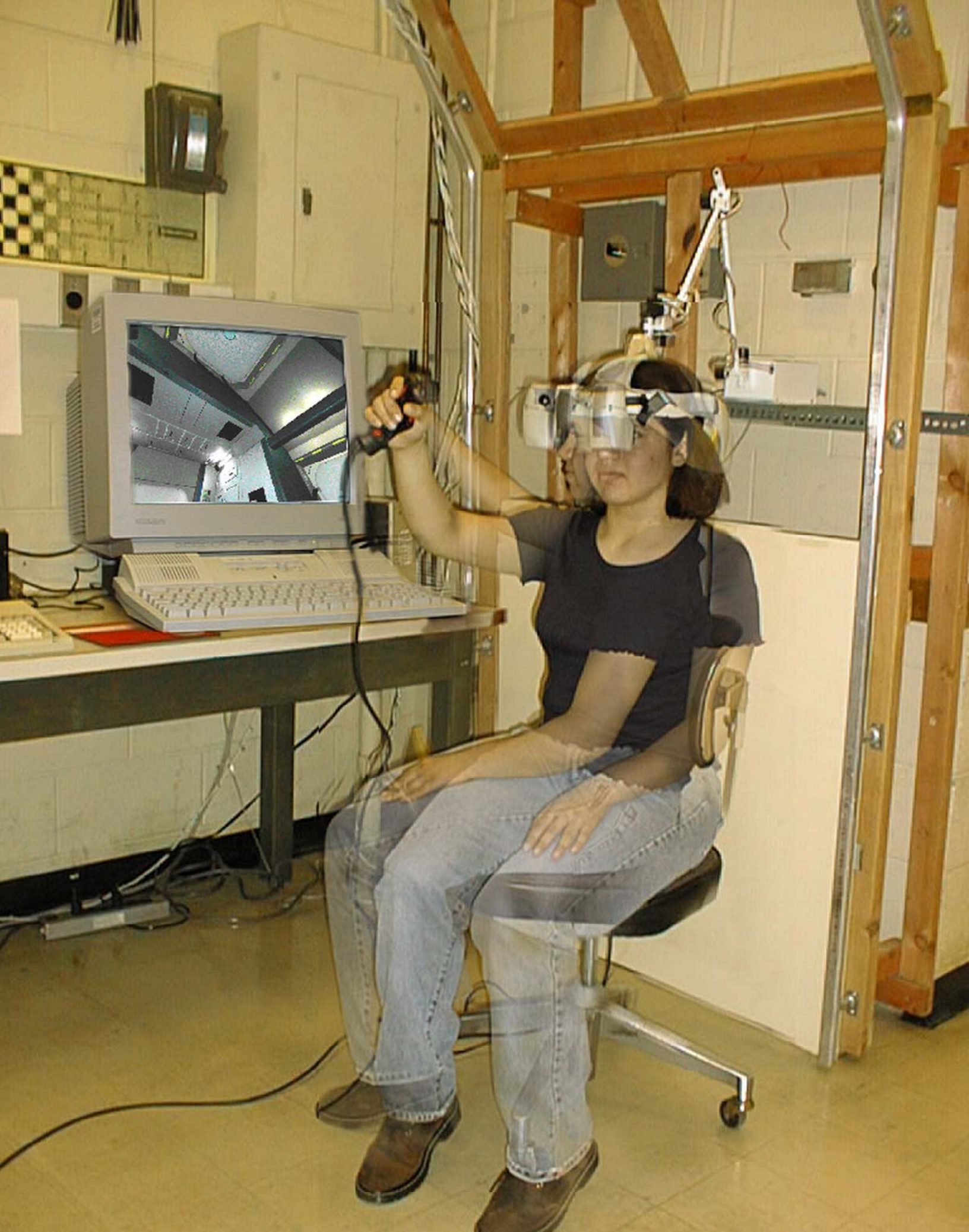


Visual Orientation in Unfamiliar Gravitational-Inertial Environments  
Grant, Howard, Shebilske, Taube, Carpenter, Smiley, Smith

The Vestibular System  
The vestibular system is responsible for maintaining balance and orientation in space. It consists of the three semicircular canals and the two otolith organs (utricle and saccule). The canals detect angular acceleration, while the otolith organs detect linear acceleration and the force of gravity.

1994 2 7

Wayne Shebilske TAMU/Wright State

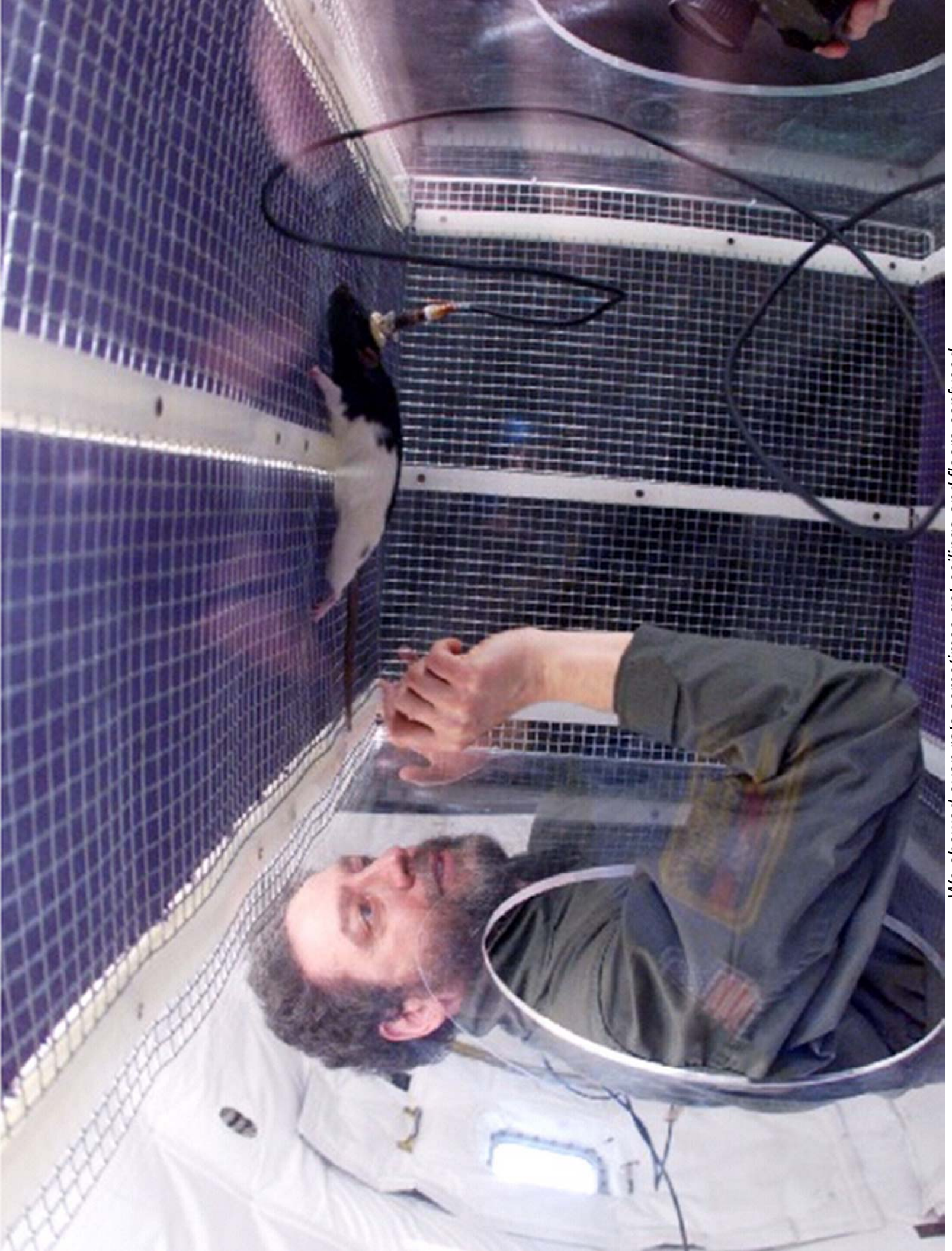


MIT UROP Hilda Guiterriez NSBRI visual orientation project



*Andy Beall and Jason Richards testing HMD*





We showed even rats sometimes get ceilings and floors confused



Bob Williams liked our rats - they don't bite and don't get sick



Chuck and Inessa Kozlovskaya - NSBRI Russian Space Medicine Course



MVL Founder YT Li's 90th Birthday



Heiko Hecht and Larry using MVL's upgraded short radius centrifuge 2000



Grandpa Larry



*Dava and Gui sailed Galatea around the world.*







MVL sailing 2001





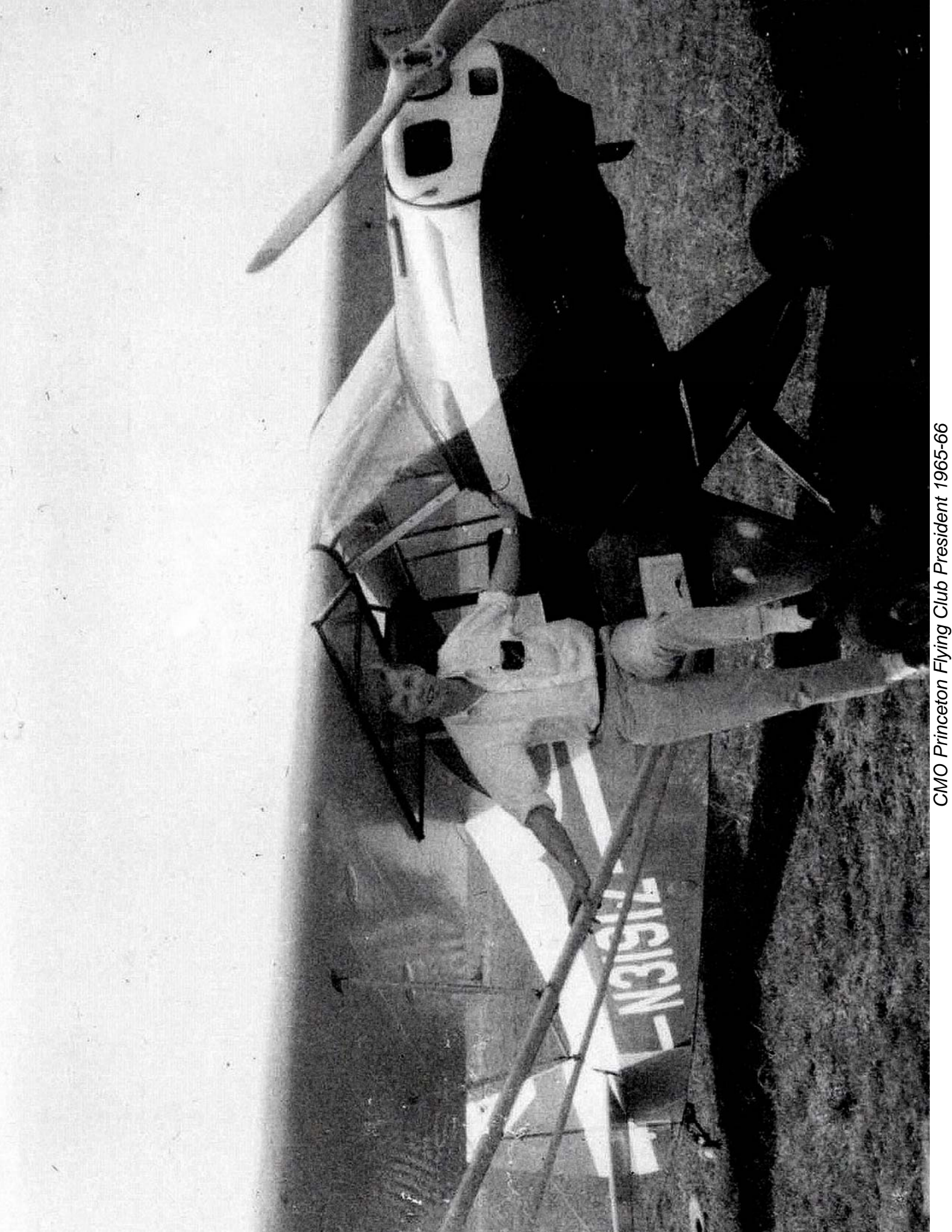


*Erika Wagner, NSBRI postdoc leads Mars Gravity Biosatellite and founded X-Prize Lab*



Liz Zotos 2006





CMO Princeton Flying Club President 1965-66



Testing Princeton's Agricultural Ground Effect Machine - summer 1995





John Hansman MIT Soaring Club 1979



Scott Rasmussen - GPS display research in Volpe's Frasca light twin simulator



Larry in UAL 777 simulator 2001



*Chuck and Cherry's house in Winchester - spring 1977*



Blizzard of early February 1978 - Katie was born a week later



Cherry, Pete and Katie in the Winchester falls -1983



Nancy Marmon and Katie as Girl Scouts - 4 July 1990



*Pete was and is a serious Duke basketball fan*





Pete's Unassisted Triple Play - Little League 1991



Winchester Soccer Bill and Andrew Kimball, Chuck and Pete, 1990



Pete QB's Griswold House victorious IM Football team 2001



*Pete's first car*



*Reed Hageman and Pete - Colgate Varsity Tennis Co-Captains*



# WESTCHESTER PRO SHOP

**PETER S. OMAN, owner**

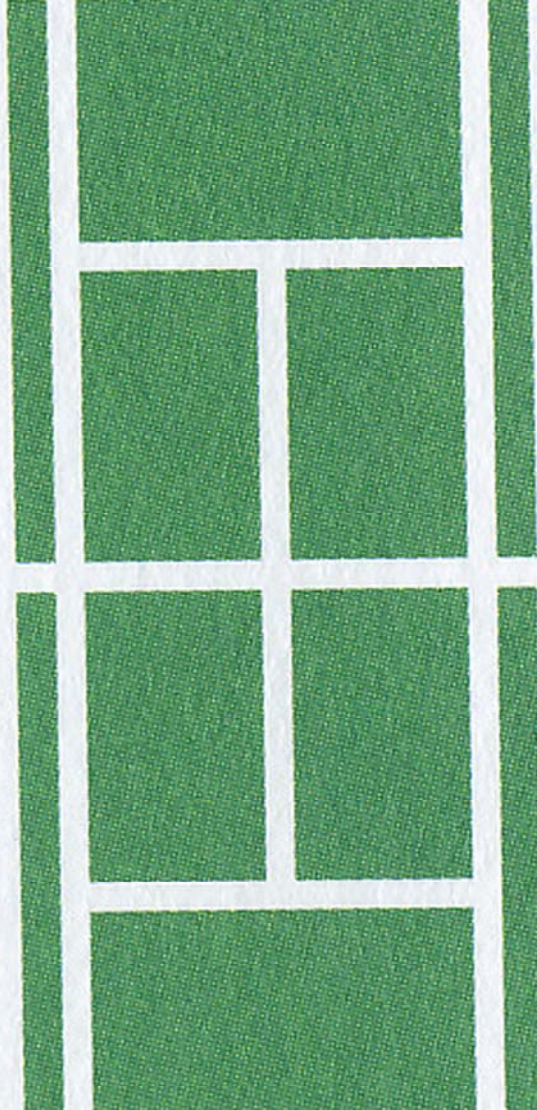
SRSA Master Racquet Technician

t 9 1 4 . 5 9 2 . 3 7 3

c 2 0 3 . 2 1 6 . 5 4 3

14 Saw Mill River Road  
Hawthorne, NY 10533

[westchesterproshop@gmail.com](mailto:westchesterproshop@gmail.com)



ennis racquets and accessories, professional racquet stringing and customization







*Katie exploring the rocks at Twin Light Manor, Gloucester 1983*



Katie and Kevin 2009



Bill Widnall and Chuck - Marblehead IOD fall series 1979



Commonwealth Cup match racing 1992



Pre-sailing breakfasts with Sheila, Bill, Billy and Anne Widnall 1968-1972



Congressional Cup match race series - Long Beach, CA 1973



Monhegan Race on Dana Atchley's Appledore III - August 1973



Marblehead-Halifax Race 1973 - Bill, Peter and Terry Siebert, Marian & Dick Thornton





Bill Siebert, Bob Donhaue, and Jack Knight Gannet Marblehead-Halifax Race, July 1973



Katie aboard Pieter and Susan Mimno's Concordia yawl Whimbrel - Stelwagen Bank 1983



Susan Mimno and Katie on Whimbrel - Maine 1990



Larry and Pieter Mimno Newport Bermuda Race aboard Nathaniel Bowditch June 1978



Chuck, Richard Gregory-Allen, Larry, Jack O'Connor Esprit Halifax-Woods Hole August 1990



Larry navigating Esprit Halifax-WoodsHole 1990



Antares crew approaching finish of 1000 mile Miami Baltimore Race 2002



Miami-Baltimore Race Antares Crew 2002





Jack McGrath and Chuck



*Chuck and Kate at finish of 1998 Bermuda Race*



*Bob Donahue's Swan 46 Antares - Onion Patch Series 2006*



Katie and Peter's N-10 "Fortuofus" - Winchester Boat Club 1998



*Pete racing Fortuofus with Andrew Kimball - Hingham Bay 1994*



Chuck and Pete Snipe racing at Winchester Boat Club 1995

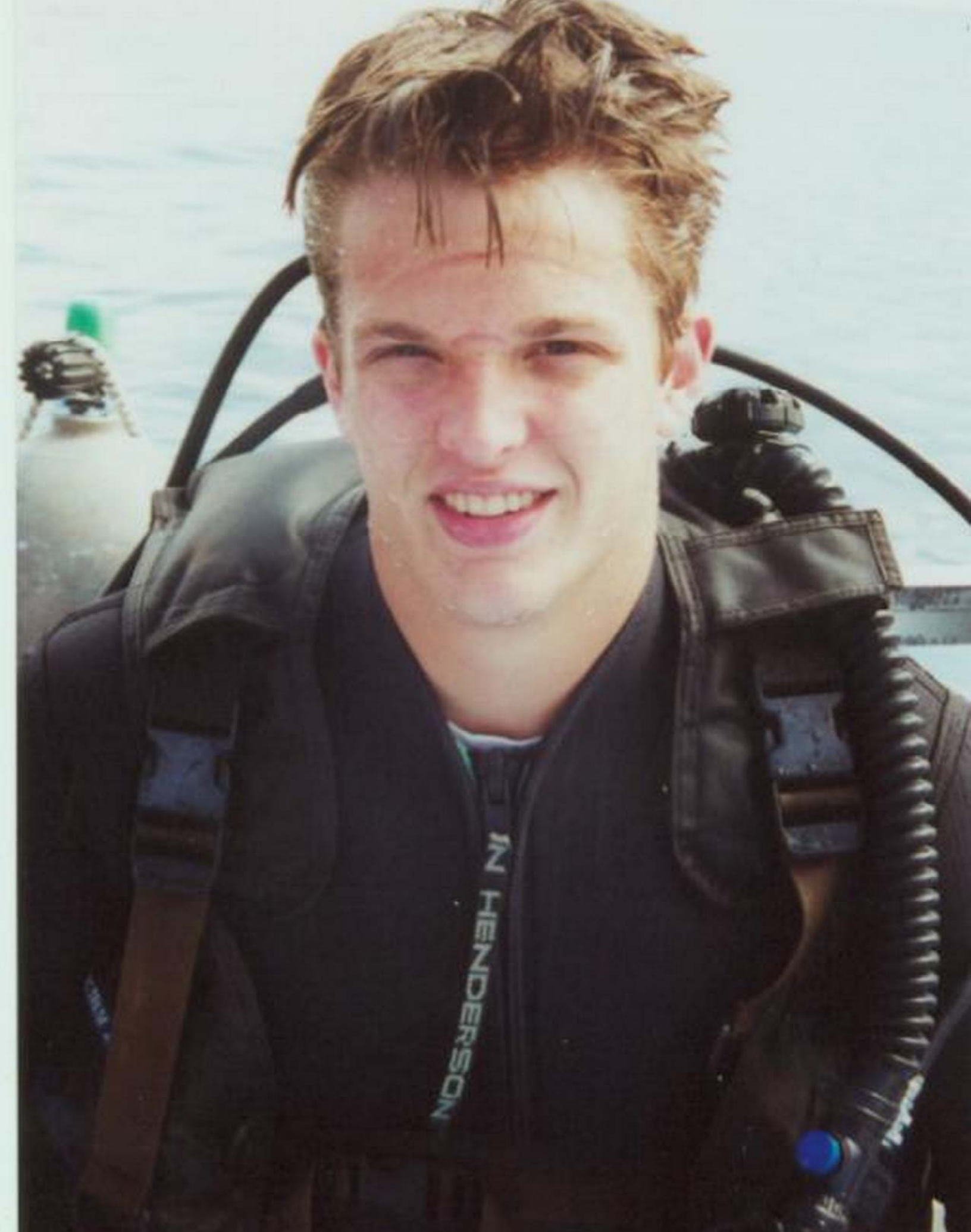


Cherry and Chuck racing 2006



Ft. Lauderdale - Newport 2003





*Pete diving 2002*