Multilateral Medical Policy Board

Transitions in Space Medicine: 25 Years in Photos

Edited by Charles R. Doarn

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Multilateral Medical Policy Board: Transitions in Space Medicine

This collection of photographic highlights covers the past 25 years of international collaboration in human space flight. Beginning in 1993, the international community came together to develop the medical systems for an international space station. Initially, this collaboration was bilateral in support of the Shuttle / Mir Space Station (Phase 1). However, the framework that was established to serve as the medical authority structure provided a foundation for the multilateral boards and panel, which were codified in the memoranda of understanding. The Multilateral Medical Policy Board, the Multilateral Space Medicine Board, and the Multilateral Medical Operations Panel were developed in a collegial and mutually beneficial environment by the men and women of the space agencies of Canada, Europe, Japan, Russia, and the United States.

This collection of photographs from official and personal collections captures the spirit and collegiality to which we have grown accustomed. They are also presented to commemorate the integrity, professionalism, tenacity, and dedication to human space exploration consistently demonstrated by individuals involved in this amazing effort.
Dedication

This photographic collection is dedicated to the men and women who have supported the development and operation of unique international medical systems for human space exploration across the U.S. Space Shuttle, Mir, Soyuz, and the International Space Station programs. Through the vision, talent, and perseverance of these individuals, a highly successful framework has been developed to enable effective solutions for the healthy and productive human presence in conditions of space exploration missions.

We acknowledge those who have gone before us for their contributions and leadership during this remarkable period in human space flight.
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Jean-Marc Comtois

**ESA**
Heinz Oser  
Volker Damann  
Guillaume Weerts

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Katsuhiko Ogata  
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Shuttle / Mir – Phase 1

Initial phase of the ISS Program

*October 1995, Houston, Texas*

Multilateral Medical Operations Working Group

Initial Meetings

Clockwise from top right:
- Entrance to the Johnson Space Center
  (Courtesy of NASA)
- Representatives of each agency
  (Courtesy of NASA)
- Shuttle/Mir Docking ca. 1995
  (Courtesy of NASA)
Shuttle/Mir – Phase 1
Multilateral Medical Operations Panel
Initial Meetings
Foundation for multilateral cooperation

Agreement Between the
UNITED STATES OF AMERICA
and OTHER GOVERNMENTS
Signed at Washington January 29, 1998
with
Annex
and
Arrangement Between the
UNITED STATES OF AMERICA
and OTHER GOVERNMENTS
Signed at Washington January 29, 1998

Top left: Face page of the MOU between NASA and other governments (Courtesy of NASA)

Top right: Entrance to the Johnson Space Center (Courtesy of NASA)

Bottom right: Representatives of each agency (ca 1996) (Courtesy of NASA)
When we did not meet face-to-face, we met virtually by video teleconferencing with consideration for differing time zones.
MMPB#1 – March 15–16, 2001
NASA JSC Houston, TX
Mission 5a.1 0
Leonardo MPLM delivery

Clockwise from left:
Expedition One launch – October 31, 2000
(William Shepherd, Sergei Krikalev,
and Yuri Gidzenko) (Courtesy of NASA)
Entrance to JSC (Courtesy of NASA)
Crew of Expedition One,
Expedition Two, and STS-102
(Courtesy of NASA)
Destiny Module and Mobile Transporter were installed. This meeting was held by video teleconferencing.
MMPB#3 – December 4, 2003
IBMP, Moscow, Russia
Policy Directive #1 – Crew Health Maintenance on the International Space Station
Shuttle grounded – Columbia and crew (STS-107) were lost.
MMPB#5 – July 15, 2004, VTC
MMPB#6 – October 28, 2004, VTC
Meetings held by video teleconferencing
MMPB#7 – March 14–15, 2005
JAXA, Tsukuba, Japan
Policy Directive #2 – Multilateral Medical Policy Board Dispute Resolutions

Top left: ISS in 2005 (Courtesy of NASA)
Bottom left: MMPB members and guests (Courtesy of NASA)
Above: JAXA Headquarters (Courtesy of NASA)
MMPB#8 – November 9–11, 2005
ESA, European Astronaut Center, Cologne, Germany

Clockwise from top left:
MMPB Board Members V. Damann (l), J-M. Comtois (c), and G. Gray (r) (Courtesy of NASA)
Dome of St. Michael, Cathedral Square, Cologne (Victor Chapa)
Expedition 11 – STS-114 (Courtesy of NASA)
Below: NASA Headquarters, Washington DC  
(Courtesy of NASA)

Top right: J-M. Comtois (l), V. Damann, V. Bogomolov,  
R. Williams, S. Tachibana (r) (Courtesy of NASA)

Bottom right: Expedition 12/13 EVA work on Columbus  
(Courtesy of NASA)
MMPB#10 – November 3, 2006
ESA, European Astronaut Center,
Cologne, Germany
MMPB#11 – May 11, 2007

**NASA JSC, Houston, Texas**

Expedition 15 – Russian EVA to install Service Module Debris Protection Panel

Policy Directive #3 – ISS Medical Data Security Policy

Top Right: EVA from the ISS
(Courtesy of NASA)

Left: Building 1, NASA JSC
(Courtesy of NASA)

Right: Multilateral reps at work at USRA site
(Courtesy of NASA)
Clockwise from below:
Expedition 16 - Taken from STS 120 (Discovery) after undocking (Courtesy of NASA)
Downtown Tokyo (Yu Kato on Unsplash)
Multilateral representatives (Courtesy of NASA)
MMPB#13 – June 5–6, 2009
IBMP, Moscow, Russia

Below: Expedition 20 - Taken from STS 127
(Discovery) ARED delivered, MPLM delivered, and
HTV delivered (Courtesy of NASA)

Right: MMPB at work at IBMP
(Doarn personal collection)

Far right: Spasskaya Tower of the Kremlin. Red Square
(Doarn personal collection)
Clockwise from above:
Expeditions 24/25 ISS as seen from STS-132 (Courtesy of NASA)
Lobby of the EAC (Doarn personal collection)
V. Schneider (l), V. Michaud, J. Allen, O Navinkov, C. Doarn (r)
(Doarn personal collection)
MMPB#15 – November 1–2, 2011
IBMP, Moscow, Russia

Expedition 28/29 Landing (Courtesy of NASA)
STS-135 (Atlantis) Shuttle Program retired
Policy Directive #4 – Prevention of Infectious Disease Transmission to ISS Crewmembers
Policy Directive #7 – ISS Healthcare System Improvement

Clockwise from below:
Expedition 28/29 Landing (Courtesy of NASA)
Kremlin, Moscow (Doarn personal collection)
Shimada (l), J-M. Comtois, V. Damann, R. Williams, A. Grigoriev, I. Ushakov (r) (Doarn personal collection)
Soyuz modules during Expedition 30, with Aurora Australis in the right corner (ISS030-E-126555). (Courtesy of NASA)
MMPB#17 – October 26, 2012
NASA JSC, Houston, Texas

Space X Dragon Capsule docking (October 10, 2012)

Left: Expedition 33 – (Courtesy of NASA)
Top right: Aerial view of USRA Center
Bottom right: Multilateral representatives (Courtesy of NASA)
MMPB#18 – January 24, 2014
IBMP, Moscow, Russia

Clockwise from left:
Crew recovery in Kazakhstan
(Courtesy of NASA)
Church in central Moscow
(Duarn personal collection)
Multilateral representatives
(Duarn personal collection)
MMPB#19 – June 13, 2014
NASA JSC, Houston, Texas
Policy Directive #6 – Environmental Health Regarding Crew in Aging Spacecraft
MMPB#20 – December 19, 2014
NASA JSC, Houston, Texas
MMPB#21 – October 9, 2015
ESA, European Astronaut Center, Cologne, Germany
First one-year mission with Scott Kelly and Mikhail Kornienko (March 27, 2015 – March 2, 2016)
Twin study (Scott and Mark Kelly)
Peggy Whitson spent 289 days on ISS, a world record for a female. She spent 665 total days in space over her career, a record among American astronauts.
Clockwise from left:
Expedition 55 ISS (Courtesy of NASA)
G. Weerts (l), J.D. Polk, V. Bogomolov, V. Pouchev, J-M. Comtois (r) (Courtesy of NASA)
Human Health and Performance Laboratory (Building 21) (Courtesy of NASA)
MMPB#25 – October 19, 2018
IBMP, Moscow, Russia

Clockwise from left:
ISS in October 2018 (Courtesy of NASA)
MARS 500 Analog facility at IBMP (Doarn Personal Collection)
Back row - G. Weerts (l-r), K. Shimada
Front row – A. Grigoriev (l-r), J.D., J-M. Comtois
(Courtesy of NASA)