



**Fig. 1.** Schematic of the designed Medilab Mir module<sup>3</sup> showing the different sections as described in the text.

War effectively curtailed the Apollo Lunar Program and the Apollo Applications Project. All of the Apollo-Saturn hardware was then relegated to museums. The 9/11 disaster had much to do with the eventual termination of the Shuttle and Constellation programs. The possibility of achieving biomedical research goals that have still not been realized such as human-rated centrifuge research and the extensive development of techniques in animal surgery/anesthesia is especially disheartening. The only survival animal surgery performed in space to date were the limited rat dissections performed on the Neurolab Shuttle mission (STS-90) in 1998. Even more disappointing in the cancellation of Medilab was that there was a great opportunity for U.S. researchers

to be heavily involved through the Shuttle-Mir Program. It is noted that of the seven U.S. Mir astronauts, three were physicians (Thagard, Linenger, Wolf) and one was a biochemist (Lucid).

## REFERENCES

1. Baranov VM, Ilyin EA, Kholin SF, Ivanovsky YuR, Pravetsky NV, et al. Concept of Medilab" orbital bio-medical laboratory. *Acta Astronaut.* 1991; 23:299-306.
2. Garshnek V. Soviet space flight: the human element. *Aviat Space Environ Med.* 1989; 60(7):695-705.
3. Grigor'ev AI, Il'in EA, Kholin SF, Ivanovsky YuR, Pravetsky NV. Objectives and tasks of projects of the medical laboratory in space "Medilab". *Kosm Biol Aviakosm Med.* 1989; 23(3):21-27.
4. Houtchens BA. Medical-care systems for long-duration space missions. *Clin Chem.* 1993; 39(1):13-21.
5. Ilyin EA, Kholin SF, Gushin VI, Ivanovsky YR. Human factors in a manned Mars mission. *Adv Space Res.* 1992; 12(1):271-279.
6. Logan JS, Jurmain MH. Considerations in the design of health maintenance facility. *Research and Technology Annual Report 1986.* Houston (TX): NASA Johnson Space Center; 1986. NASA Technical memorandum 58277.
7. Miasnikov VI, Gushchin VI, Ivanovskii IuR, Kholin SF. Medilab and the problems of psychophysiological support of manned space flights. *Kosm Biol Aviakosm Med.* 1990; 24(6):11-18.
8. Mir comes down to Earth. *Flight International.* 1989; April 15: 46-48.
9. Mir space station. *Flight International.* 1990; December 5-11:28.
10. Soviets-U.S. discuss astronaut swap. *National News. EIR.* 1990; 17(8):70-71. September 16.

## STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION (Required by 39 U.S.C. 3685)

1. Title of Publication: *Aerospace Medicine and Human Performance*. 2. Publication No. 008-760. 3. Date of Filing: October 1, 2017. 4. Frequency of Issue: Monthly. 5. No. of Issues Published Annually: 12. 6. Annual Subscription Price: \$270. 7. Complete Mailing Address of Known Office of Publication: Aerospace Medical Association, 320 S. Henry St., Alexandria, VA 22314-3579. 8. Complete Mailing Address of Headquarters or General Business Office: Aerospace Medical Association, 320 S. Henry St., Alexandria, VA 22314-3579. 9. Full Names and Complete Mailing Address of Publisher, Editor, and Managing Editor: Publisher -- Aerospace Medical Association, 320 S. Henry St., Alexandria, VA 22314-3579. Editor -- Frederick Bonato, Ph.D., 725 Joralemon St Unit 1 Belleville New Jersey 07109-1482. Managing Editor -- Pamela C. Day, B.A., Aerospace Medical Association, 320 S. Henry St., Alexandria, VA 22314-3579. 10. Owner: Aerospace Medical Association, 320 S. Henry St., Alexandria, VA 22314-3579. 11. Known Bondholders, Mortgages, and other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, and Other Securities: None. 12. For Completion by Nonprofit Organizations Authorized to Mail at Special Rates: The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes has not changed during the preceding 12 months. 13. Publication Name: *Aerospace Medicine and Human Performance*. 14. Issue Date for Circulation Data: September 2017.

## 15. Extent and Nature of Circulation:

	Ave. No. of Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest Filing Date
a. Total no. copies	2019	1908
b. Paid circulation		
1. Paid/requested outside county mail subscriptions	1056	1020
2. Paid in-county subscriptions	0	0
3. Sales through dealers and carriers, street vendors, and counter sales	581	571
4. Other classes mailed through USPS	1	0
c. Total paid/requested circulation	1638	1591
d. Free distribution:		
1. Outside county	0	0
2. In-county	0	0
3. Other classes mailed through USPS	0	0
4. Free distribution outs	30	30
f. Total free distribution	30	30
g. Total distribution	1663	1621
h. Copies not distributed	351	287
i. TOTAL	2019	1908
Percent Paid and/or Requested Circulation	98.2%	98.15%