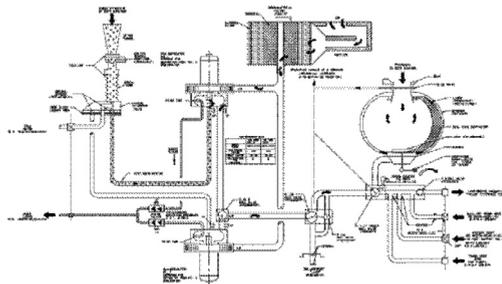


ACY-schematic.



Shuttle toilet trainer.



Honoring Yuri Gagarin tradition before Soyuz launch.



Jeffrey A. Jones, Baylor College of Medicine-Urology / Center for Space Medicine, Houston, TX; Chief of Urology Michael E. DeBakey Veteran Affairs Medical Center, Houston, TX

<https://doi.org/10.1016/j.urology.2018.11.066>
UROLOGY 128: 12–13, 2019. Published by Elsevier Inc.

AUTHOR REPLY



We sincerely appreciate the thoughtful comment accompanying our manuscript. We wholeheartedly agree that physiological changes in microgravity require sophisticated technology, despite the seeming simplicity of voiding.

As highlighted in the commentary, the discoveries that help astronauts eat, drink, and “pee merry” have had direct translations for the earth-bound. Innovations in water recycling and high absorbency space diapers have been translated into applications on earth.

The greatest success of the space program is not only the technological advancements but also the human collaboration. The Space Race started as a competition between the Soviet Union and the United States to secure national security and gain global influence. Even the engineering for waste management echoed the tone of the Space Race; advancements in waste management in space were notable for firsts from both the Soviets and Americans. However, the change in political climate after the fall of the Soviet Union sparked increased areas of cooperation, including strategic partnerships in space. For example, Russian cosmonauts barter their urine with the American astronauts in exchange for solar energy. Today, the International Space Station represents strong “pee-ceful,” international collaboration, transcending political barriers.

Kimberly A. Maciolek, Sara L. Best, Department of Urology, University of Wisconsin School of Medicine and Public Health, Madison, WI; Department of Surgery, Division of Urology, William S. Middleton Memorial Veterans Hospital, Madison, WI

<https://doi.org/10.1016/j.urology.2018.11.067>
UROLOGY 128: 13, 2019. Published by Elsevier Inc.