

IAF HUMAN SPACEFLIGHT SYMPOSIUM (B3)
Utilization & Exploitation of Human Spaceflight Systems (3)

Author: Dr. Ousmane Diallo

National Aeronautics and Space Administration (NASA), United States, ousmane.diallo@nasa.gov

Dr. Tara Ruttlely

National Aeronautics and Space Administration (NASA), Johnson Space Center, United States,
tara.m.ruttlely@nasa.gov

Dr. Kirt Costello

NASA, United States, kirt.costello-1@nasa.gov

Ms. Judy Tate-Brown

Barrios Technology, Inc., United States, judy.tate-brown-1@nasa.gov

Dr. Luchino Cohen

Canadian Space Agency, Canada, luchino.cohen@canada.ca

Dr. Isabelle Marcil

Canadian Space Agency, Canada, isabelle.marcil@canada.ca

Mr. Andreas Schoen

ESA - European Space Agency, The Netherlands, andreas.schoen@esa.int

Dr. Jennifer Ngo-Anh

European Space Agency (ESA), The Netherlands, jennifer.ngo-anh@esa.int

Dr. Masaki Shirakawa

Japan Aerospace Exploration Agency (JAXA), Japan, shirakawa.masaki@jaxa.jp

Ms. Sakiko Kamesaki

Japan Aerospace Exploration Agency (JAXA), Japan, Kamesaki.sakiko@jaxa.jp

Dr. Georgy Karabadzhak

TSNIIMASH, Russian Federation, gfk@tsniimash.ru

Mr. Vasily Savinkov

State Space Corporation ROSCOSMOS, Russian Federation, savinkov.vv@roscosmos.ru

Dr. Igor V. Sorokin

S.P. Korolev Rocket and Space Corporation Energia, Russian Federation, igor.v.sorokin@gmail.com

Dr. Vittorio Cotronei

Italian Space Agency (ASI), Italy, vittorio.cotronei@asi.it

Mr. Giovanni Valentini

Italian Space Agency (ASI), Italy, giovanni.valentini@asi.it

IMPACT OF THE INTERNATIONAL SPACE STATION RESEARCH RESULTS

Abstract

The International Space Station (ISS) facilitates research that benefits human lives on Earth and serves as the primary testing ground for technology development to sustain life in extreme environment of space. To date, investigators have published a wide range of ISS science results, from improved theories about the creation of stars to the outcome of data mining “omics” repositories of previously completed ISS investigations.

Because of the unique microgravity environment of the ISS laboratory and the multidisciplinary and international nature of the research, analyzing ISS scientific impacts is an exceptional challenge. As a result, the ISS Program Science Forum (PSF), made up of senior science representatives across the ISS international partnership, uses various methods to describe the impacts of ISS research activities. One method used to evaluate the significance of scientific output from the ISS, beyond the often-used journal impact factor, is to track the article citations and the Eigenfactor of journal importance across the ISS partnership. From 1999 to October 1, 2018, the top 100 science journals as ranked by Eigenfactor (and reported by Clarivate Analytics®) have published 165 articles from ISS research.

Another method the PSF uses to describe ISS impacts includes the use of visualizations of scientific publication data to show the ISS research influence on traditional scientific fields, its global reach, and the benefits to people across the globe.