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Committee on the Peaceful Uses of Outer Space
Scientific and Technical Subcommittee
Fifty-seventh session
Vienna, 3-14 February 2020
Item 13 of the provisional agenda*
Long-term sustainability of outer space activities

Proposal by Japan: Concerning the Bureau of the new working group on the long-term sustainability of outer space activities

The present conference room paper was prepared by the Secretariat on the basis of information received from the delegation of Japan. The information was reproduced in the form it was received.

The proposal was received by the Secretariat on 16 January 2020 and was circulated via official information circular to all Permanent Missions of States members of the Committee on 16 January 2020.

* A/AC.105/C.1/L.383

Proposal by Japan

Concerning the Bureau of the new working group on the Long-term sustainability of outer space activities

Japan is pleased to nominate Dr. KIBE Seishiro as one of the members of the bureau of the Working Group on Long-term Sustainability of Outer Space Activities (LTS 2.0 WG).

Japan has been contributing in drafting and adoption of the LTS guidelines. It is keen to remain committed to the sustainability of outer space activities through supporting COPUOS member states in the area of implementation of the adopted guidelines and studying challenges through its technical expertise.

Based on Dr. KIBE's background, Japan is confident that his contribution to the Bureau of LTS 2.0 WG especially from scientific and technical perspectives offers numerous benefits to all COPUOS member states.

Dr. KIBE Seishiro is a Special Advisor of JAXA and is the current Vice President of the International Astronautical Federation (IAF, the world's largest academic association for space technology and sciences) from 2017.

He is a leading expert in Japan's space debris research and has dedicated his career to the advancement of various fields in national and international space research, including space debris, space structural dynamics, remote sensing, human spaceflight and life support engineering.

He also has expertise in leading the international space debris community through his involvement in the establishment of Inter-Agency Space Debris Coordination Committee (IADC), where he contributed to the creation of the IADC space debris mitigation guideline and the IADC protection manual. He has also contributed to the capacity building and promotion of international cooperation with emerging countries, through his career as a visiting professor in the Asian Institute of Technology in Bangkok from 2006 through 2009.

Biography

Dr. Seishiro KIBE

Special Advisor

Japan Aerospace Exploration Agency

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Dr. Seishiro Kibe is a leading expert in Japan's space debris research and has dedicated his career to the advancement of various fields in national and international space research, including space debris, space structural dynamics, remote sensing, human spaceflight and life support engineering. He also has expertise in leading the international space debris community through his involvement in the establishment of Inter-Agency Space Debris Coordination Committee (IADC), where he contributed to the creation of the IADC space debris mitigation guideline and the IADC protection manual. He has also contributed to the capacity building and promotion of international cooperation with emerging countries, through his career as a visiting professor in the Asian Institute of Technology in Bangkok from 2006 through 2009 and as the Vice President of the International Astronautical Federation (IAF, the world's largest academic association for space technology and sciences) from 2017.

Dr. Kibe joined the National Aerospace Laboratory of Japan (NAL, one of the former organizations of JAXA) in 1981 and has been conducting the space debris-related research for more than thirty years. During his career, he developed the hypervelocity launcher system which could accelerate an aluminum projectile of 1 gram up to 10 km/s to simulate the actual debris impact in space. In addition, through conducting the Post Flight Analysis of the Space Flyer Unit (Japan's first retrievable space system like EURECA of ESA), he also provided international community with invaluable data on the distribution of the small size debris which cannot be observed from the ground. More than 20 years ago, he internationally advocated the necessity of the active debris removal operation to maintain and improve the space debris environment, and initiated the R&D program on the ADR system in Japan. Recently the electrodynamic tether, a key subsystem of his ADR concept to efficiently decelerate a target for deorbiting, was

technically demonstrated on HTV6 (launched in 2016). He has also contributed to the establishment of JAXA's space debris mitigation standard (1996), which is the world's second space debris-related standard after NASA's guideline (1995).

Since 1993, as the starting member of IADC, Dr. Kibe has been actively engaged in the IADC activity. In 2000, he was appointed as the Chair of the Protection Working Group, afterward Japanese representative to the Steering Committee of the IADC in 2006, and greatly contributed to the IADC activities, such as establishing the space debris mitigation guidelines and the protection manual.

From 2000 through 2003, he was appointed as committee member of the Space Activity Commission of the Japanese Central Government and was heavily involved in securing the safety of Japanese launching operation.

In 2008, he was elected corresponding member of the International Academy of Astronautics (IAA) and full member (in 2013) and has been heavily involved in the many study activities on the space debris. He was one of the main contributors of the IAA Situation Report on Space debris-2016. From 2012 through 2016, he was appointed as the Vice Chair of the Panel on Potentially Environmentally Detrimental Activities in Space (PEDAS) of the COSPAR and promoted international collaboration of the space debris research.

He worked for the Asian Institute of Technology in Bangkok, Thailand as a visiting professor and engaged in space education for students from various developing countries, greatly contributing to many capacity building programs for the remote sensing data utilization (2006-2009). From 2011 through 2019, he was appointed as the member of Board of trustees and from 2013 Vice Chair of the BOT of the International Space University in Strasburg, France.

Dr. Kibe is currently the Vice President of the International Astronautical Federation (IAF), the world largest academic association for space technologies and sciences, and is supervising the Honors and Award Committee and the Congress and Symposium Advisory Committee. Through the wide variety of the IAF activities, he is enthusiastically contributing to the promotion of the international collaboration and involvement of emerging countries in the international space arena.

Attachment

Professional and Academic Chronology

Professor Kibe's professional and academic career is chronologically summarized below (**International in bold**).

1st Jun. 1981 Joined the National Aerospace Laboratory of Japan

11th Feb. 1985 Stayed at Virginia Polytechnic Institute as a research associate

Jul. 1986 to Sep. 1987 Temporarily moved to the Science Technology Agency to support planning Japan's participation in the International Space Station Program

1991 to 2006 Member of the advisory committee of the Institute of Environmental Science

Apr. 1993 to Mar. 1998 Part-time lecturer in Aerospace Engineering at the graduate school of the Tokyo Metropolitan Institute of Technology

1996 Part-time lecturer in Mechanical Engineering at Sophia University

Since 1996 Board member of The Society of Eco-engineering.

Apr. 1999 to Sep. 2003 Professor in Aerospace Engineering at the graduate school of the Tokyo Metropolitan Institute of Technology

2000 to 2001 Board member of The Japan Society for Aeronautical and Space Sciences

2000 to 2003 Committee member of the Space Activity Commission of the Japanese Government

2000 Received the Award for Exquisite Research from the Minister of the

Science and Technology Agency

2001 Part-time lecturer in Aerospace Engineering at the graduate school of Tokyo University

2002 to 2005 Executive secretary of the Local Organizing Committee for the 56th International Astronautical Congress.

1st Oct. 2003 National Aerospace Laboratory merged with the Japan Aerospace Exploration Agency (JAXA)

Oct. 2003 to Mar. 2005 Deputy Director in the Strategic Planning and Management Department of JAXA HQ.

Apr. 2005 to Jul. 2009 Advisor to the Director, Institute of Aerospace Technology of JAXA

Since 2006 Member of the IAF Congress and Symposium Advisory Committee

Jul. 2006 to Jul 2009 Visiting Professor at the Asian Institute of Technology

Mar. 2008 to Jul 2009 Field coordinator in the Remote Sensing and Geographical Information Systems FoS, School of Engineering Technology, Asian Institute of Technology

Aug. 2009 to Mar. 2013 Director of the Innovative Technology Research Center, JAXA

2008 to 2012 Corresponding Member of the International Academy of Astronautics (IAA)

2009 to 2016 Representative for the Japanese delegation to the International Space Debris Coordination Committee (IADC)

2009 to 2011 Chairman of the Committee on General Affairs of International Symposium on Space Science and Technology (ISTS)

2010 Distinguished Service Award, Japan Society of Eco-Engineering

2011 to 2015 Vice President of the Japanese Society of Eco-engineering

Since 2011 Member of the ISU Board of Trustees

Since Apr. 2012 Advisor to the Director of JAXA

2012 to 2016 Vice chair of the COSPAR Panel on Potentially Environmentally Detrimental Activities in Space

Since Feb. 2013 Vice Chair of the ISU Board of Trustees

Since 2013 Full Member of the International Academy of Astronautics (IAA)

Since 2014 Fellow of the Japan Association of International Commission of Agricultural and Biosystems Engineering

Jun. 2015 to May 2017 President of the Japan Society of Eco-engineering

Since Jun. 2017 Visiting advisor of JAXA's International Relations and Research Department

Since October 2017 Vice President of the International Astronautical Federation (IAF)