
ASSOCIATION OF SPACE EXPLORERS
XXXIII PLANETARY CONGRESS





Forty-eight astronauts and cosmonauts from eleven nations gathered November 1-5, 2021 in Budapest, Hungary for the XXXIII ASE Planetary Congress. Hosted by Hungarian cosmonaut Bertalan Farkas and sponsored by the Hungarian Ministry of Foreign Affairs, the theme of the XXXIII Congress was “New Challenges and Opportunities for Earth in Space”, reflecting the new and rapid advancements in human spaceflight and global commercial space sectors.

The XXXIII Congress officially opened on Monday, November 1 at the Hilton Budapest with welcome remarks by Congress host Bertalan Farkas and Hungarian Minister of State for Security Policy Péter Sztaray. ASE President Oleg Kotov closed the ceremony with the traditional moment of silence, observed in remembrance of those astronauts and cosmonauts who have passed away since the previous Congress in 2019.

Monday afternoon began with a tree planting and the unveiling of a plaque commemorating the legacy of all deceased fliers. The ceremony in Varosliget Park was capped by a three-ship fly over by the Hungarian Air Force.



Later that day, the fliers returned to the hotel where Oleg Kotov chaired the Congress Theme Session on Global Challenges and Opportunities in Space. Dr. Orsolya Ferencz, Hungarian Ministerial Commission for Space Research opened the session and spoke about the Hungarian government’s efforts to grow an indigenous space sector, with a particular focus on expanding technical education and professional opportunities. Professor Jan Wörner, former Director General of ESA followed via remote connection and spoke about the global challenges to spaceflight due to climate change sensitivity and politics.



The session concluded with a panel discussion led by Dutch astronaut André Kuipers with Oleg Kotov, Janet Kavandi, Jeff Hoffman, and Mike Fincke participating. The panel expanded upon the theme of the session and noted the need for international cooperation and leveraging private sector providers to complement government space exploration programs.

Tuesday morning began with the first technical session of the Congress – the traditional “International Space Programs Review.” NASA Astronaut Office Deputy Chief Drew Feustel kicked things off with a presentation about the status of the US Astronaut Office and impending planning challenges and opportunities, including future private space missions that will travel to the International Space Station. Russian cosmonaut Alexander Poleshchuk then gave a brief update on the integration of the Multipurpose Laboratory Module into the Russian segment of the International Space Station.



Hungarian Space Mission Director of Operations and Crew Training Gá-

bor Magyari followed with an update on Hungary’s plans to be a part of the “New Space Age”, and ESA astronaut Alexander Gerst joined the session remotely from Cape Canaveral to provide an update on ESA’s current post-low Earth orbit strategy, including plans for their contributions to the Gateway space station.



Tuesday afternoon, the second Technical Session of the day, “Commercial Space and Astronautics,” focused on the many new and exciting commercial space activities emerging around the globe. Sierra Space President and former astronaut Janet Kavandi opened the session with an update on the company’s Dream Chaser spaceplane and the recent announcement of its new partnership with Blue Origin on the Orbital Reef space station. ASE member

Danny Olivas then presented on the new Regional Space Strategy of the Azores that is seeking to make the Azores a one-stop shop for the space industry, including launch opportunities.

Garrett Reisman joined the session remotely and gave an unofficial update on SpaceX’s work culture, focusing particularly on their ability to “completely, unabashedly embrace failure” at the beginning of projects that allows them to iterate and learn quickly. Virgin Galactic Chief Pilot Dave Mackay then presented on the recent Unity 22 suborbital spaceflight and showed off previews of the company’s newest spacecraft. Space flier Charles Simonyi wrapped up the day’s session with a retrospective on his spaceflights and personal history that enabled those flights.

Meanwhile, companions and guests enjoyed a guided bus tour of Budapest, visiting Heroes Square, the Old Market Hall, Saint Stephen’s Basilica and parliament House. That evening, fliers and spouses enjoyed a private tour of the Parliament House, followed by dinner and an evening of Hungarian cultural entertainment. To conclude the evening, Slovak cosmonaut Ivan Bella received his ASE logo insignia from ASE President Oleg Kotov, recognizing Bella’s first attendance at an ASE Congress.



Wednesday was the traditional ASE Community Day – the fliers visited with students, the public and local officials in Győr, Debrecen, Kecskemét, Miskole and Budapest, delivering the astronaut perspective on the benefits of space science, research and exploration and the value of investing in the next generations of explorers by expanding opportunities for education in scientific and technical fields.

Thursday morning, the fliers assembled at the hotel for a technical session focusing on “Beyond LEO: Moon & Mars Exploration.” Hungarian ESA Delegation Advisor Balázs Zábori opened the session by presenting Hungarian innovations in the field of space dosimetry. Retired ESA astronaut and professor Christer Fuglesang followed with an informative presentation

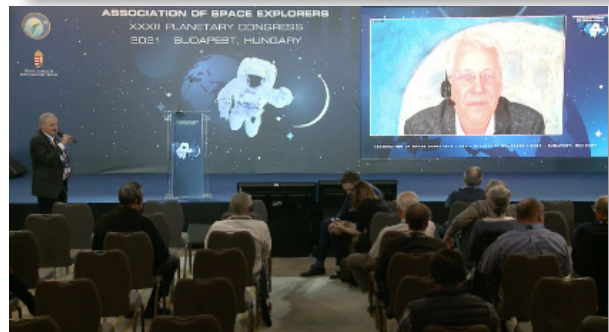


about utilizing a sunshade system at the L1 Lagrange Point in space to assist with global temperature control, noting that it “might be a good idea to have a plan B” if countries don’t achieve their set goals for reducing emissions.



Assistant to the Chief of the NASA Astronaut Office for Exploration Col. Randy Bresnik delivered a brief on the status of NASA’s Artemis Program, noting that the “ASE vision statement is becoming reality very quickly” and highlighting recent progress, including the recent addition of the 13th signatory (the Polish Space Agency) to the Artemis Accords. To wrap up the morning session, retired NASA astronaut and professor Jeff Hoffman, presented recent updates on NASA’s Perseverance Rover and its MOXIE (Mars Oxygen In-Situ Resource Utilization Experiment) technology demonstration. “The most important thing to remember: Mars is hard!”

Session Chair Dr. Christian Feichtinger, Executive Director of the International Astronautical Federation kicked off the last session “Hazards to Exploration and Cooperation in Space” by introducing space lawyer Balázs Bartóki-Gönczy, who elaborated on the legal challenges of space exploration and exploitation. Retired NASA astronaut and aerospace consultant Col. Mark Brown followed with a remote briefing on ASE efforts to address space traffic-management and orbital debris (STM&OD), including initiatives by ASE and partner organizations to advocate for better international protocols to mitigate the hazards of orbital space debris objects. Retired ESA astronaut Thomas Reiter concluded the session with a briefing on ESA’s space safety program. Reiter also discussed the current status of ESA’s space collision avoidance programs and initiatives to clean up space.



Thursday’s companion program included visits to Buda Castle, the Matthias church. Barlang Cave, “The Underground Flower Garden of Budapest,” and the tomb of Turkish Dervish Gül Baba.



Thursday evening, fliers and companions visited the Lázár Lovaspark Ranch for a world-class equestrian demonstration with Hungarian riders, horses, donkeys, and oxen.

Friday morning the fliers gathered for their respective regional chapter meetings and the traditional General Assembly, where the business of the association was discussed and a new Executive Committee was elected for 2022. Syrian cosmonaut Muhammed Fares declared his intent to host the

2022 Congress in Istanbul, Turkey.



The Closing Ceremony of the XXXIII Congress took place Friday evening at the historic Gundel Etterem restaurant in central Budapest. ASE President Oleg Kotov announced the recipient of the Perchatka (the Glove), awarded by vote of the members, to Jeff Hoffman for the best technical presentation at the XXXIII Congress. Dr. Hoffman presented the preliminary results of the Mars Oxygen In-Situ Resource Utilization Experiment (MOXIE), a technology demonstration investigating the production of oxygen on Mars.

A Leonov Medallion was awarded to XXXIII ASE Planetary Congress host Bertalan Farkas for his life-long contributions to and support for the growth of space science and education in Hungary and ASE's Crystal Helmet was presented to Hungary's Rosetta Mission project team for their significant contributions to the success of the Rosetta mission to Comet 67P.



Bottom row, left to right: Oleg Kotov, Dumitru-Dorin Prunariu, Viktor Savinykh, Bertalan Farkas, Michael Fincke, Salizhan Sharipov. Second row: Alexander Ivanchenkov, Drew Feustel, Jeffrey Hoffman, Anna Fisher, Danny Olivas. Third row: Alexander Poleshchuk, Mary Ellen Weber, Franz Viehböck, Claudie Haigneré, Christer Fuglesang, Linda Godwin, André Kuipers, Mohammed Faresoglu. Fourth row: Yuri Gidzenko, Ulrich Walter, Gerhard Thiele, Michael Baker, Jan Davis, Pedro Duque, Jean-Pierre Haigneré, Ernst Messerschmid, Clayton Anderson. Back rows: Valery Korzun, Sergei Revin, Shannon Lucid, Yuri Usachev, Randolph Bresnik, James Voss, Robert Satcher, Jr., Tony Antonelli
