

XXXIV Congress Report

Seventy-two astronauts and cosmonauts from 17 nations gathered September 25-29, 2023 in Bursa, Türkiye for the XXXIV ASE Planetary Congress. The Congress was sponsored by Gökmen Space Aviation Training Center (GUHEM) and the Bursa Chamber of Commerce and Industry; the theme of the XXXIV Congress was “The Future is in the Skies”, embracing the visionary words of Mustafa Kemal Atatürk, the founder of modern Türkiye.

The XXXIV Congress officially opened on Monday, September 25 at the Bursa Business School, located at Swissôtel Uludağ Bursa, with welcome remarks by ASE President Reinhold Ewald, Turkish government officials, and astronaut Michael Lopez-Alegria. The ceremony closed with the traditional moment of silence, observed in remembrance of those astronauts and cosmonauts who have passed away since the previous Congress.

The Monday afternoon Theme Session featured a panel of Turkish industry professionals who discussed Türkiye's space capabilities and future plans. GUHEM General Manager Halit Mirahmetoğlu, Plan-S representative Umut Yildiz, Türksat representative Mehmet Nefes, and TUA President Serdar Hüseyin Yildirim had a lively discussion about what Turkish organizations have accomplished in space, as well as the importance of cultivating space awareness in children at an early age and the need for government support of the private sector in these endeavors.

The second half of the session, "Türkiye's Future in Space", featured a panel of Turkish industry professionals and the two newly selected Turkish astronauts. TÜBİTAK President Hasan Mandal, Turkish astronauts Alper Gezeravci and Tuva Atasever, Delta-V representative Arif Karabeyoğlu, and TÜBİTAK SPACE Assistant Director of the Institute Alime Özyildirim shared their thoughts on Türkiye's current positioning and future in space.

Monday concluded with a Gala Dinner and the traditional Pinning Ceremony. John-David Bartoe and Franz Viehböck were presented with Distinguished Member pins for their decades of service to the association. Seven first-time Congress attendees were also presented with their ASE pins during the ceremony: Victor Glover, Sergei Korsakov, Sergei Kud-Sverchkov, Denis Matveev, Matthias Maurer, Mark Pathy, and Eytan Stibbe.

Tuesday morning began with the first technical session of the Congress: "New Space Economy." Session Moderator Christian Feichtinger, Executive Director of the International Astronautical Federation (IAF), started off the session by describing the partnership between ASE and IAF and celebrating the formation of a new IAF astronaut committee. Michael Lopez-Alegria, former NASA astronaut and current Chief Astronaut at Axiom, gave an update on Axiom Space and how – from its already operational Private Astronaut Missions to its in-progress commercial space station – it is "building for beyond" and creating a market for this new space economy. Tom Marshburn, former NASA astronaut and Chief Medical Officer of Sierra Space, followed with an update on Sierra Space and its quest to "maximize the end-user experience," including Dream Chaser Tenacity, the LIFE Habitat, and the Human Spaceflight Center.

The session concluded with a group panel discussion led by Christian Feichtinger about crew experiences, challenges, hopes, and biases with the newly-selected Turkish astronauts as well as Tom Marshburn, Eytan Stibbe, Michael Lopez-Alegria and Mark Pathy.

Former NASA astronaut Danny Olivas opened the afternoon session, "Operations in Low Earth Orbit & Beyond," moderated by ESA astronaut Matthias Maurer, with a detailed and instructive look back at space suit technology from Apollo to the International Space Station – and a look forward to what's coming next (xEVAs). Soyuz MS-19 & Expedition 66 Commander Anton Shkaplerov provided attendees with an update on his mission. He discussed what it was like to fly a film director & an actress to space to film aboard the ISS, and he even brought a clip for everyone to enjoy. During their Expedition 67 report, Sergei Korsakov, Denis Matveev, and Oleg Artemiev shared a music video that Sergei made aboard the ISS in collaboration with the band Uma2rman for their song, "Stars."

At the conclusion of the session, two additional first-time Congress attendees, Chinese astronauts Fei Junlong and Cai Xuzhe, were presented their ASE pins by ASE President Reinhold Ewald. Fei Junlong gave a presentation about Chinese flight experiences, the Tiangong Space Station, and plans for an upcoming lunar mission before 2030. He also noted that utilizing space peacefully can create a better future for humanity. Matthias Maurer wrapped up the afternoon by providing a review of ESA activities. He highlighted the recent new astronaut selection, the importance of investing in a European capability for human access to space, and progress on a new moon training facility being developed in by ESA and DLR.

Meanwhile, companions and guests enjoyed lunch in the city of Bursa. They then paid a visit to the Green Tomb, the mausoleum where the fifth Ottoman Sultan Mehmed I is buried. The tour continued with a visit to the Panorama Museum, a futuristic dome with a 360-degree wall painting depicting the 14th century Ottoman conquest of Bursa. The companions reunited with the fliers for an Old Town tour, including a visit to the Ulu Cami (Grand Mosque), before ending the tour at the Ancient Bazaar Region, where everyone had free time to shop and have dinner.

The fliers began Wednesday morning with a tour of GÜHEM, Türkiye's first space and aviation-themed interactive center. While there, they signed the Wall of Legends and explored very impressive aerospace and astronomical exhibits. This was followed by the traditional Congress Community Day, where the astronauts and cosmonauts traveled within Türkiye to visit with students, teachers, and community leaders. Fliers reconvened in the evening for Regional Assemblies to discuss the state of their respective regions' ASE activities. The companions took an excursion to Golyazi Lake and Church, as well as Cumalikazik Old Town for a nature day.

On Thursday morning, Julie Payette moderated the Space Agency Review panel, which began with a virtual presentation by Liu Feng of CNSA. Feng discussed the construction progress of the Tiangong Space Station; their plans for international cooperation, including 9 projects with the United Nations Office for Outer Space Affairs; and their aim to "contribute to the development of space technology of the world, to the peaceful use of outer space and to the benefit of humanity."

Victor Glover followed with a presentation on the state of the NASA Astronaut Office, including the status of the current astronaut candidate class, NASA's plans for opening the call for the next class early next year, and the latest updates on the Artemis II mission. In describing Artemis II, he said, "We're going to hear those words we haven't heard since 1972: 'You are go for trans-lunar injection.'" Koichi Wakata then gave an update on the state of JAXA, including their two newest astronaut candidates, their recent

astronaut missions to the International Space Station, and their educational Kibo Robot Programming Challenge.

In her update on the Canadian Space Agency, session Chair Julie Payette highlighted their four currently active astronauts, the development of Canadarm3, Jeremy Hansen being assigned to Artemis II, and their goals of advancing deep-space health and food innovations. Alexander Alexandrov ended the session with an update on the state of Roscosmos, including the transition to new rockets and space technology projects, the creation of an independent national state infrastructure, and the future development of the Russian manned space program.

In an afternoon closed session, Danny Olivas focused on the technical requirements and challenges of creating new EVA suits for both low Earth orbit and lunar missions. On Thursday night, Reinhold Ewald and Paolo Nespoli returned to GUHEM to present to many excited families visiting the center. Victor Glover presented remotely.

For the Thursday Companion Program, the companions took a trip to Cumalıkızık Village, İznik Lake, İznik Museum, and İznik Castle for Culture Day: "Village Life and Intercultural Learning Tour."

On Friday morning the fliers gathered for the traditional General Assembly, where the business of the association was discussed and a new Executive Committee was elected for 2024. Dutch astronaut Andre Kuipers declared his intent to host the 2024 Congress in The Netherlands. This was followed by a Commemoration Event where the fliers remembered friends and colleagues who have passed since the previous Congress.

The Closing Ceremony of the XXXIV Planetary Congress took place on Friday night and began with the presentation of the Perchatka by ASE Executive Director Andy Turnage and ASE President Reinhold Ewald. This award is voted on by ASE members for the best technical presentation of the Congress. This year's Perchatka was awarded to first-time Congress attendee Victor Glover.

A poster signed by the attending astronauts and cosmonauts was presented to Swisshotel for their hospitality and the amazing work of their staff. XXXIV Congress host Halit Mirahmetoglu of GUHEM, along with his staff, was presented flown artwork (courtesy of Valery Tokarev). Halit was then joined by İbrahim Burkay, Bursa Chamber of Commerce and Industry (BTSO) Chairman, to receive the Leonov Medallion for successfully hosting the XXXIV Planetary Congress.

The Crystal Helmet was presented posthumously to Ismail Akbay, a NASA engineer who worked with Wernher von Braun. Originally from Bursa, his initiative has inspired many Turkish and international students to become passionate about space. His niece accepted the award on his behalf.

Before enjoying a delicious four-course meal, the ASE flag was passed from the host of the XXXIV Planetary Congress to the host of the XXXV Planetary Congress, Andre Kuipers.