

## **Statement of the Polish Delegation to the 64 Session of the COPUOS**

**Vienna, 27 August 2021**

### **Agenda Item 4**

**Delivered by Prof. Piotr Wolański**

*Dear Mr. Piso,*

Mr. Chairman, me and my delegation are pleased to see You chairing this session. I am deeply convinced that your experience, knowledge and leadership will contribute to the success of this meeting. At the same time, I would like to assure You about the full support of the Polish Delegation.

I would also like to express our thanks to the representatives of the Office for Outer Space Affairs, especially Madam Simonetta Di Pippo and her team, for their huge efforts and a great work, in preparing this Session in time of the COVID-19 pandemic.

*Mr. Chairman, Distinguished Delegates,*

Last year was very active for the Polish space sector and many events related to space activities were exceptional successes.

The Solar Orbiter probe, in which the Space Research Centre of the Polish Academy of Sciences teams were involved, was launched on February 10, 2020 by the ESA mission. It is dedicated to the research in the physics of the Sun and the heliosphere. The STIX X-ray spectrometer / Telescope has worked properly. Observations with this device will help explain the mechanism of acceleration of electrons on the Sun and their transport into interplanetary space.

Space Research Centre of the Polish Academy of Sciences was selected as a partner of the NASA IMAP mission thanks to many years of experience in the study of the heliosphere, in which the pressure of the solar wind outweighs the pressure of galactic matter. The experience has been confirmed by cooperation on such missions as IBEX (NASA) and Solar Orbiter and PROBA-3 (ESA).

Also since 2012, the Institute of Aviation in Warsaw has been working on the use of space technologies to monitor forests and crops using multi-spectral satellite remote sensing.

Recently, a method of crop detection has been developed and it will be used operationally by the Central Statistical Office. The innovative Sentinel-1 data processing methods were used. The obtained results were very highly evaluated by ESA experts. The land cover classification for the whole Poland was made and the results were handed over to the Polish Space Agency as the first service to be used in the National Terrestrial Segment.

Experts from Space Research Centre Crisis Information Centre, commissioned by the General Headquarters of the State Fire Service, constantly monitored the fire in the Biebrza National Park. The scale of this event (4,200 hectares and a smoke cloud about 120 km long) was manageable only with the help of satellite observations.

Teams from Łukasiewicz Network - Institute of Aviation and Space Forest are developing sub-orbital rocket, which will pave the way for further development of the modern rocket propulsion in Poland. The rocket is to reach international recognized space boundary "Von Karman Space line" and provide commercial microgravity experiments.

Also Łukasiewicz Network - Institute of Aviation is leading in the EU on the development of green rocket propulsion using highly concentrated hydrogen peroxide and is also developing for ESA solid propellants engines for deorbiting large satellites after completion of their missions.

The Polish nanosatellite PW-Sat2 prepared in the frame of educational project of the Student's Space Association from the Warsaw University of Technology, which was launched on 3 December 2018 on the board of Falcon 9, was deorbited on 23 February 2021 after 813 days in orbit. The de-orbiting was performed with the implementation of "solar sail". This maneuver was the main goal of this nanosat mission. In Poland many students' association groups is following different space activities initiated more the 20 years ago by students from the Warsaw University of Technology.

On 30 June 2021 rocket LauncherOne, which was launched by B-747-400, placed on orbit two Polish satellites STORK-4 and STORK-5 build by a private company SatRevolutions. Satellites are designed for remote sensing with resolution of 5m, and are first of dozens of satellites which might form in future the first Polish constellations of remote sensing satellites.

These activities are examples of the spectrum of Poland's international cooperation in space and are the important part of our contribution in building the international space sector.

We would also like to congratulate NASA on the return to launching astronauts to the ISS from USA using SpaceX Dragon spacecraft and initiation of Space Touristic flights by Unity 22 of Virgin Galactic and New Shepard-16 of Blue Origin, both private companies from the USA.

Our congratulations go also to China for launching Tiangong space station and the first crew of 3 Taikonaut for a 3-month stay.

*Mr. Chairman, Distinguished Delegates,*

Thank you for your attention.