

19th IAA SYMPOSIUM ON BUILDING BLOCKS FOR FUTURE SPACE EXPLORATION AND
DEVELOPMENT (D3)Strategies & Architectures as the Framework for Future Building Blocks in Space Exploration and
Development (1)

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OPPORTUNITIES FOR SPACE EXPLORATION UNDER THE UNITED NATIONS ACCESS TO
SPACE 4 ALL INITIATIVE: ACHIEVEMENTS IN 2020-2021**Abstract**

The United Nations Office for Outer Space Affairs (UNOOSA) promotes international cooperation in the peaceful uses and exploration of space and in the utilization of space science and technology for sustainable socioeconomic development. UNOOSA's Access to Space 4 All Initiative, developed to accelerate and modernize capacity-building efforts, provides tracks that offer gradual learning steps helping participants develop capabilities in a sustainable and responsible manner. There are currently three tracks each offering a variable number of hands-on opportunities under an overarching theme:

- Hypergravity/Microgravity Track: designed with the end goal of developing the capacity of running space experiments onboard orbital vehicles or space stations.
- Satellite Development Track: aiming at building the capacity to design, implement, verify, operate and decommission a satellite in a responsible and sustainable manner.
- Exploration Track: designed to cover aspects related to space exploration beyond the geostationary orbit and provides opportunities, as building blocks, to that goal.

Currently, the Exploration track consists of one opportunity, delivered in cooperation with the Keldysh Institute of Applied Mathematics, to study celestial bodies beyond the geostationary orbit. More innovative partnerships are envisioned for the future under this track, for instance, there is ongoing work on analogues and on data provision, which will materialize during the first half of 2021. This paper will provide an update of the activities and experiments carried out under the Exploration Track during 2020-2021 together with information on the new opportunities available and future prospects.

Partnerships are a distinctive feature of the Access to Space for All. The Initiative is supported by governmental, intergovernmental and commercial stakeholders, who are providing access to state-of-the-art facilities and infrastructure to support the development of technical and scientific capabilities in the

different tracks. UNOOSA is working on establishing new partnerships to cover some of the gaps identified in the Initiative and expand its portfolio. UNOOSA is actively working on expanding its portfolio of activities and is searching for more partners to cover some of the identified gaps in the Initiative.