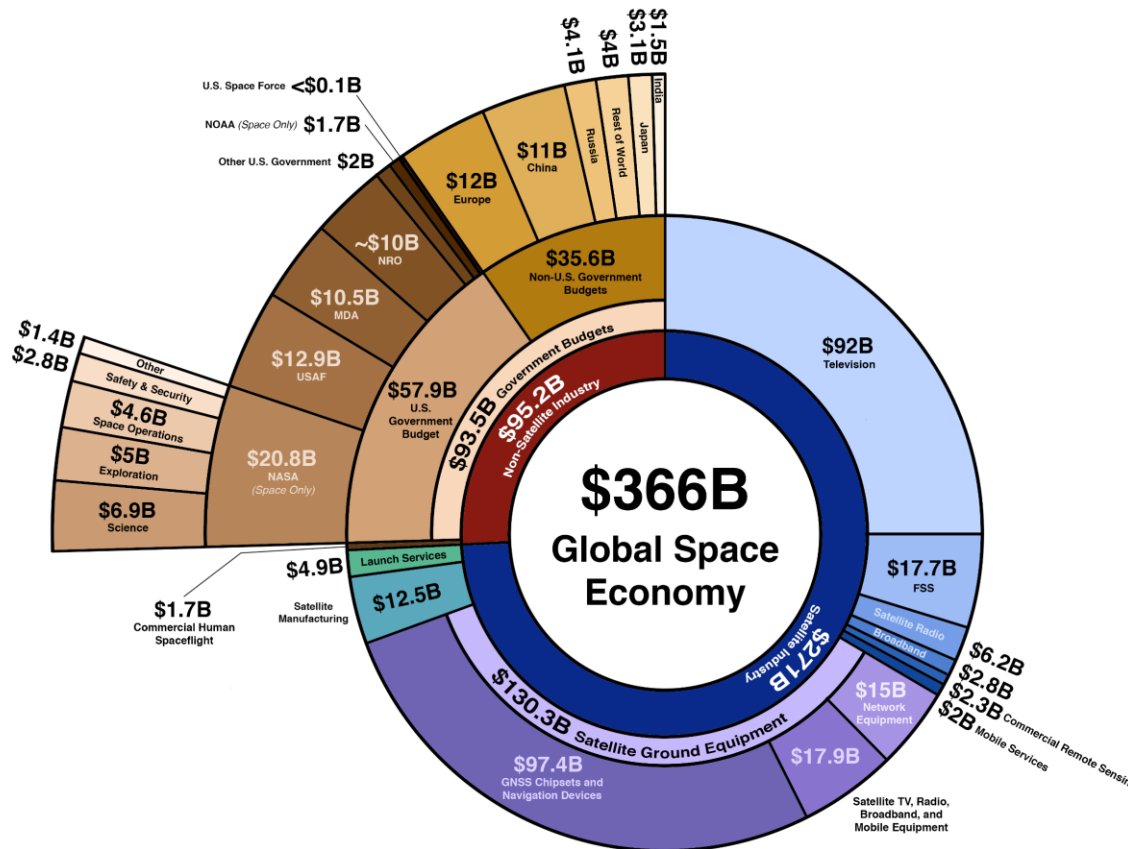


ACCESS TO SPACE FOR ALL



UNITED NATIONS
Office for Outer Space Affairs

The 2019 Global Space Economy at a Glance





Space is affordable!!!

- Mangalyaan vs The Martian ~73M\$ vs ~108M\$
- Chandrayaan-2 vs Large airplane ~142M\$ vs ~150M\$
- Amateur receiving station for meteorological Satellites vs a movie ticket for 2 in Vienna ~85\$ vs ~20\$

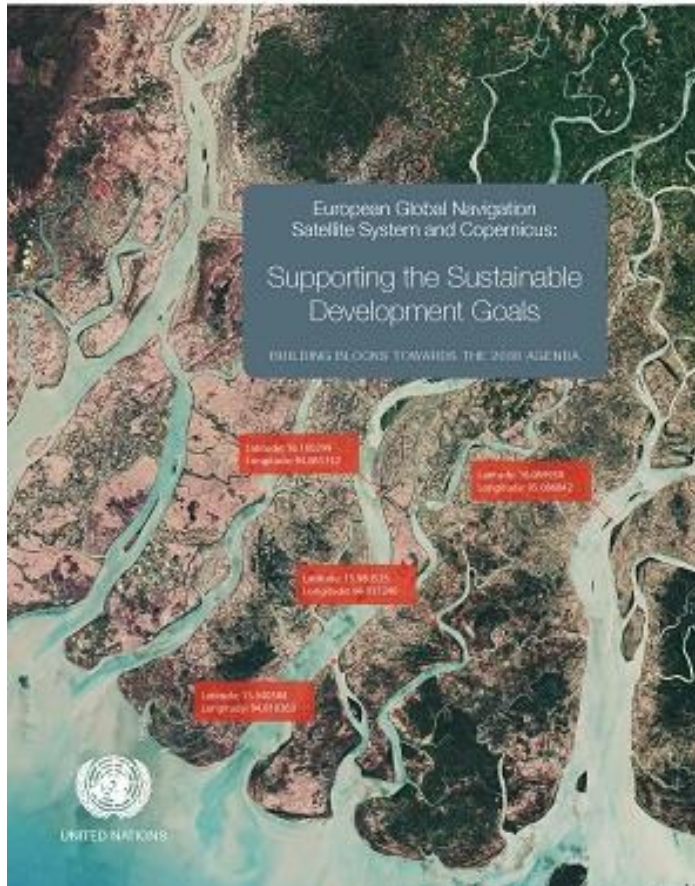


SPACE4SDGS





UNITED NATIONS
OFFICE FOR OUTER SPACE AFFAIRS



https://www.unoosa.org/res/oosadoc/data/documents/2018/stspace/stspace71_0.html/stspace_71E.pdf



Access to Space for All

“The goal of Access to Space is to provide research and orbital opportunities for UN Member States to access space and to ensure that the benefits of space, in particular for sustainable development, are truly accessible to all”



History

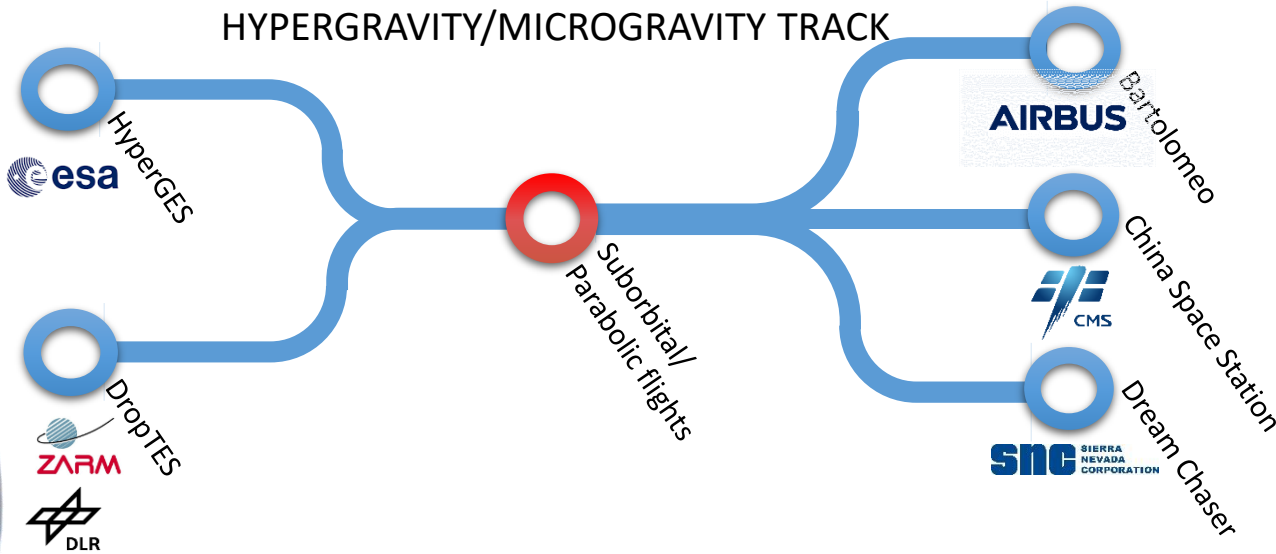
- ❑ Programme on Space Applications (established in 1971)
- ❑ Goal: Furthering knowledge and experience on space applications
- ❑ Several sides to capacity-building
- ❑ Theoretical
 - ❑ Regional Centres
 - ❑ Fellowships
 - ❑ Curricula
 - ❑ Workshops and Training
 - ❑ Dissemination of information
 - ❑ Space4Water Portal (Prince Sultan Bin Abdulaziz International Prize for Water)
 - ❑ Space Applications connected to the global agendas (SDGs)
- ❑ Policy
 - ❑ Advisory services
- ❑ Practical
 - ❑ Access to Space for All Initiative (established in 2018)



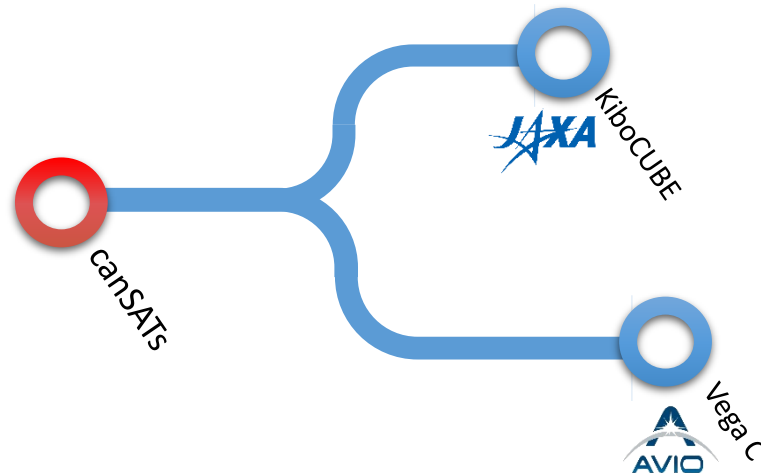
Access to Space For All Initiative



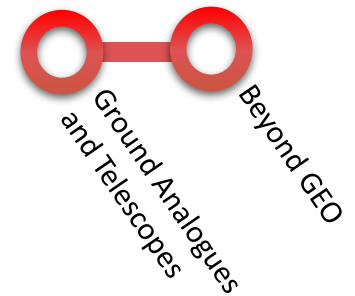
HYPERGRAVITY/MICROGRAVITY TRACK



SATELLITE DEVELOPMENT TRACK



EXPLORATION TRACK



■ Active opportunities

■ Identified gaps



Fellowship Programme on the Large Diameter Centrifuge Hypergravity Experiment Series (HyperGES)

- Hypergravity experiment series at the Large Diameter Centrifuge (LDC) facility, ESTEC
- Research teams:
 - Must be from entities in UN Member States
 - Should comprise of 4 bachelors, masters, and/or PhD students who must be endorsed by their academic supervisor (team leader)
- Preparing for next round
- unoosa-access-to-space@un.org





Fellowship Programme for “Drop Tower Experiment Series” (DropTES)

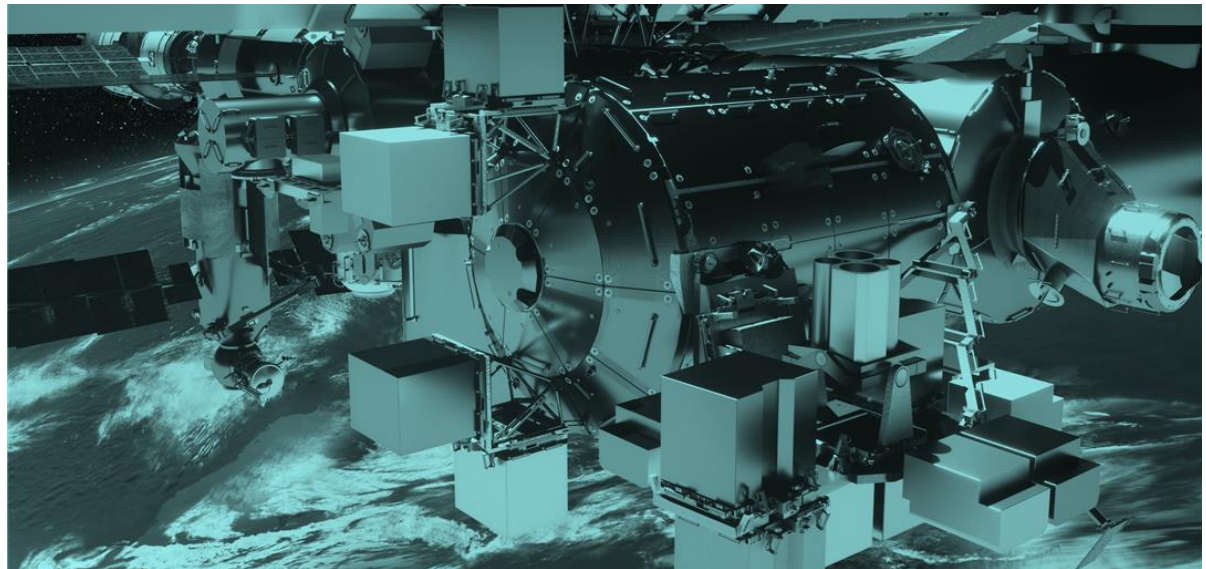
- ❑ Experiments at the Bremen Drop Tower (4 drops or catapult launches, 5-10 seconds of microgravity)
- ❑ Research teams:
 - Must be from entities in UN Member States
 - Should comprise of 4 bachelors, masters, and/or PhD students who must be endorsed by their academic supervisor (team leader)
- ❑ Preparing for next round
- ❑ unoosa-access-to-space@un.org





Accessing Space with the ISS Bartolomeo Platform

- External payload experiments aboard Airbus Bartolomeo on ISS
- Research teams must:
 - From entities in UN Member States
 - Transport the payload to Houston, Texas, USA
- Currently running selection process
- unoosa-access-to-space@un.org

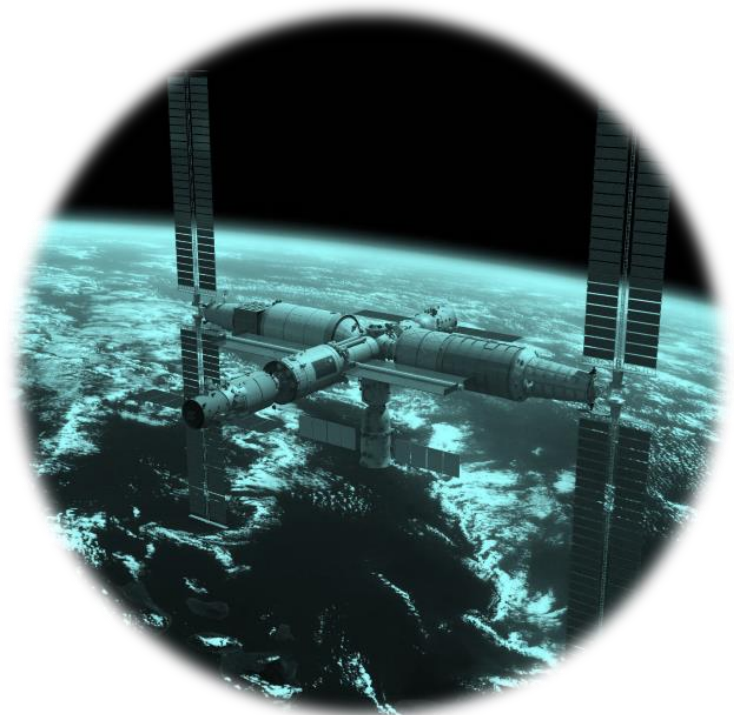


AIRBUS



Cooperation on the Utilization of the China Space Station (CSS)

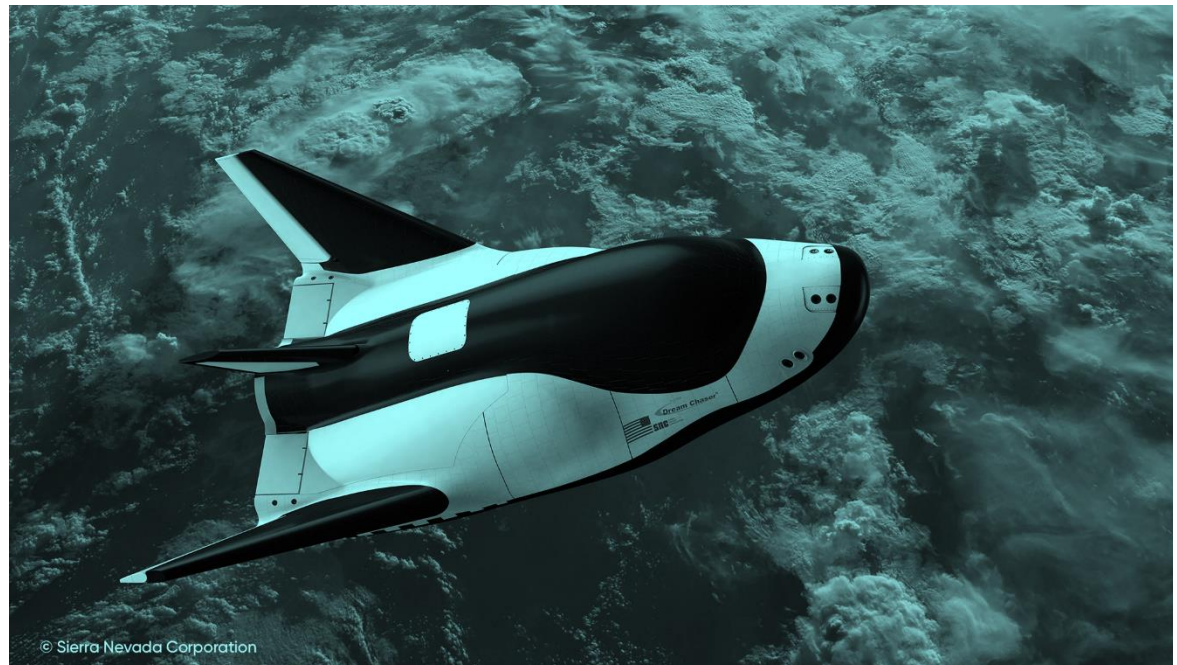
- Payload or facility experiments inside or outside the CSS (first module launch planned for end of 2020)
- Next round under discussion
- unoosa-access-to-space@un.org





Sierra Nevada Corporation's Dream Chaser

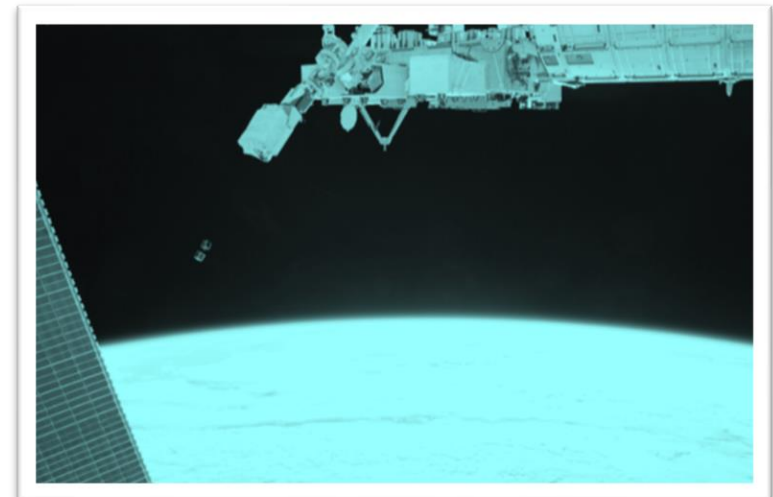
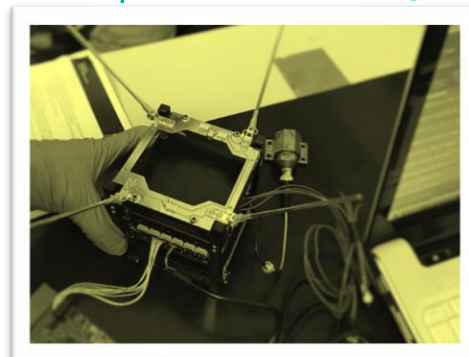
- DreamChaser Landing Site
- Open to all UN Member States
- Call for Landing Site closed 30 April 2020





CubeSat Deployment from the ISS Japanese Experiment Module (Kibo) “KiboCUBE”

- CubeSat development and deployment from educational or research institutions from developing countries
- Research teams must be from entities:
 - In UN Member States
 - In countries that do not have the means to transport artificial satellites into space and place them in orbit
- Preparing for next round
- unoosa-access-to-space@un.org





Accessing Space with Vega C

- ❑ Cubesat launch opportunity
- ❑ Research teams must:
 - From entities in UN Member States
 - Transport the payload to Guyana Space Centre or Brno (Czech Republic).
- ❑ Applications opened in October 2020. Deadline: 4 April 2021
- ❑ unoosa-access-to-space@un.org





Series of Webinars on Access to Space for All

| COMMON WEBINARS TO ALL OPPORTUNITIES | Webinar Title | Learners will be able to | Date |
|--------------------------------------|---|--|-------------------|
| | Access to Space 4 All | <ul style="list-style-type: none"> - describe the Access to Space 4 All Initiative and why it is important - describe the objectives of the Access to Space 4 All Initiative - list the tracks - list the opportunities - list the partners of the Access to Space 4 All Initiative | 30 September 2020 |
| | How to raise awareness and engage the audience about your project | <ul style="list-style-type: none"> - prepare a successful communications plan - approach media and permanent missions to raise awareness | 28 October |
| | Space Law and Regulations | <ul style="list-style-type: none"> - to enhance understanding of fundamental principles of space law - to understand the importance of space object registration - describe the steps for frequency registration | 11 November |
| | Ask a winner | <ul style="list-style-type: none"> - incorporate lessons learned from previous winners for example solutions and difficulties when undertaking their projects | 25 November |
| | Artificial Intelligence and Access to Space | <ul style="list-style-type: none"> - Describe some of the tools that have been made possible by artificial intelligence and how they can be used in the context of Access to Space 4 All | 02 December (TBC) |
| | Space Engineering Basics | <ul style="list-style-type: none"> - describe the different phases of the space engineering process at high level - describe the different reviews at high level - apply to the development of a system | Date TBC |

THANK YOU



UNITED NATIONS
Office for Outer Space Affairs