

How to Sponsor the International Space University's *Team Projects*



One of the most significant activities conducted in many of the ISU programs is the development of Team Projects where the participants select the project where they can contribute with their expertise during their ISU experience.

These team projects usually address specific topics and issues relevant to the global space community and lend themselves to the broad, interdisciplinary, international, and intercultural approach that is fundamental to ISU's programs.

Sponsor's Role

The International Space University (ISU) is pleased to offer the opportunity to sponsor an ISU Team Project (TP) in any of our major programs outlined in this brochure.

Sponsor's Recognition and Benefits

A sponsor will receive appropriate recognition, including logo and name placement on the final report, and recognition when results are presented at conferences (e.g., the International Astronautical Congress), space agencies (e.g., NASA, ESA), and elsewhere.

Additionally, sponsors will have the opportunity to interact with the talented space professionals who attend ISU.

Each Team Project report is webcast during the final presentations, receives exposure via online news, and is often advertised to an international press database via press releases.

Examples of previous Team Project reports and Executive Summaries can be found on the ISU Library website (https://isulibrary.isunet.edu/).

Team Projects Sponsoring Opportunities

The **Master of Space Studies Program (MSS)** is intended for individuals seeking professional development, further academic study, or both, through a one or two-year graduate degree program at the ISU Main Campus in Strasbourg, France. The MSS program produces two TP reports each year.

The **Space Studies Program (SSP)** provides a curriculum designed specifically for professionals starting or changing emphasis in their space careers or for people working in space-related fields who wish to broaden their knowledge and understanding beyond their current discipline. The SSP changes location from year to year to bring space education to the world. The SSP produces four TP reports each year.

The **Southern Hemisphere Space Studies Program (SHSSP)** is designed for students, academics and professionals from all disciplines and is conducted in partnership with the University of South Australia in Adelaide. The SHSSP produces two TP reports each year.

Team Projects for 2020-2022

Below are short descriptions for the upcoming team projects in the different programs. Additional information can be provided upon request.

MSS20, Strasbourg, November 2019 - May 2020:

Space & the Search for Intelligent Life Beyond Earth

Humans have been searching the sky for centuries for some sign of extraterrestrial civilizations.

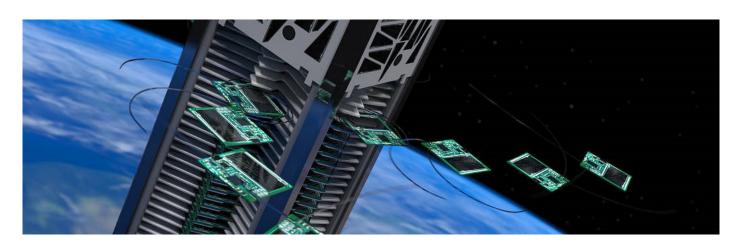
Researchers are now continuing their search using new methods like using optical signals, and in the future perhaps they will find information in gamma ray burst, and even from gravity waves.

To continue the quest to locate evidence of advanced technologically mature civilizations we must understand all potential ways of communication and surveillance.



Chipsats – New Opportunities

Chipsats are spacecraft the size of a credit card down to a small postage stamp. Such tiny spacecraft would introduce a paradigm shift in spacecraft design and allow for completely new types of space missions. For example, chipsats are currently considered as the best option for a true interstellar mission envisioned by Breakthrough Starshot.



SSP20, Strasbourg, July - August 2020:

• In-orbit mobility and manipulations

Controllable on-board propulsion is essential for trajectory correction, orbit insertion, station keeping, rendezvous, and other satellite and deep-space purposes. However, people have been concerned over its use in anti-satellite weapon systems.

The goal of this team project is to assess the present situation and document practical ways for the world to continue to enjoy the benefits of maneuvering technology while reducing the chance of its being misused.



Space Medical Centre

Many medical questions are still open for crewed missions in space, especially beyond Low-Earth Orbit.

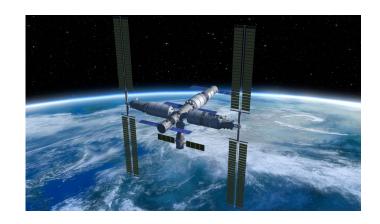
Longterm human body adaptation might lead to severe medical conditions with the potential of impacting mission success.

There is a need to study and facilitate health management in space that can be easily accessed by a large number of people living and working off planet.



International use of the China Space Station

According to the Announcement of Opportunities for International Cooperation on the Use of the China Space Station, the Station is open to all countries, organizations and private entities, providing scientists around the world with the opportunity to conduct space science experiments. This team project will provide a roadmap to achieve these goals.



• Intercontinental Sub-orbital Commercial Liner

This team project studies the use of reusable space transportation technology to build a fast and convenient intercontinental vehicle for passenger/cargo flight that has great commercial value in the future, and its related technical, commercial and legal issues are worthy of investigation.

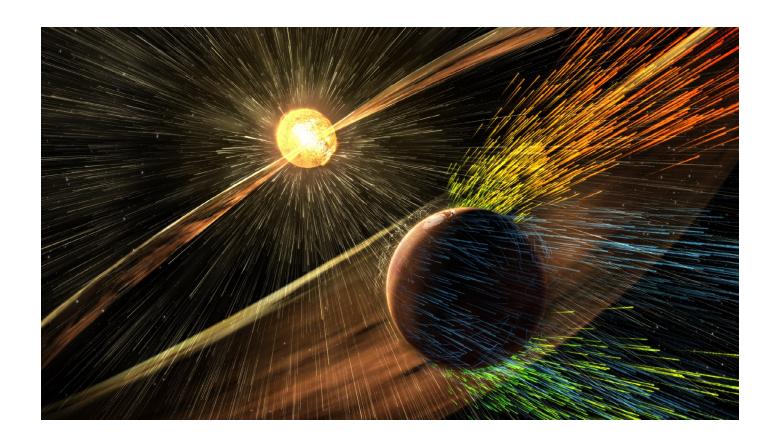


MSS21, Strasbourg, November 2020 - May 2021:

• Solar Storm Shield for Earth

There is recent data that the Earth's magnetic poles are shifting and one of the consequences of this is that the world's natural protective shielding from the Van Allen Belts against solar storms will be diminished in future years.

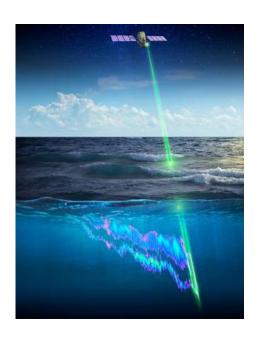
This team project studies whether it is possible to create a solar storm shield (especially against a coronal mass ejection) that could protect Earth against a massive surprise events.



• Space Technology for Sustainable Ocean Solutions

Climate change, pollution, and global exploitation of resources constitute serious problems, and the key to address these challenges may be found at sea.

This team project studies how space technology can help us in the battle to save our oceans from severe pollution and waste while creating viable and sustainable solutions for the world's maritime industry.



SHSSP21, Adelaide, January - February 2021:

Space and Fighting Bushfires

The 2019-2020 Australian fire season was particularly disastrous due to drought and climate change. Bushfires have significant regional and global impacts on climate change.

This study will examine the potential for space assets and technologies to better identify and provide early warning of fire danger by sensing soil and brush conditions. It will then propose how space assets and applications can be used to mitigate the destructive burning and its after-effects.



(Backup): A Model for Regional Space Alliances to Promote High Technology Economic Development

This team project will propose alliances between emerging space nations.

Participants will draw on the experience of the European Space Agency to construct a framework that captures the appropriate aspects of the ESA model, recognizing the unique characteristics of each target region studied.



SSP21, Granada, July - August 2021:

Solutions for Construction of a Lunar Base

After Chang'e 4, the United States, India, Japan, Russia and other countries have declared their plans for Moon landing missions.

Many scientists believe that we are now living during a revival of Moon exploration.

This team project studies how to prepare for the future construction of a lunar base, and identifies what technologies need to be developed and ready to be implemented when they are needed in the future.



The Golden Human Record 2.0

The Voyager Golden Record made history as the first human messages to leave the Solar System.

This team project will study what a Golden Record would say today, which medium would be used to carry the information, in what language or code it should be written, as well as which vices should be hidden.



• Advanced Agriculture and Nutrition for Long-Term Space Missions and Permanent Off-World Settlements

New advances in biotechnology, nutrition and agricultural can help optimize the selection of and different methods for a food production, relaxing the requirements for off-world bases and improving the performance and health of the crews.

This team project studies the sustainable production of food in space.



• (Back-up): Solving Big Challenges with SmallSats.

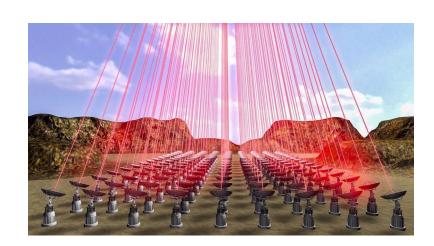
This team project will select an application that contributes to solving a real-world problem, as described by the UN Sustainability Development Goals, and - by using a small satellite platform as a tool - develop a full satellite mission from conception to flight from both a business and technical point of view.



MSS22, Strasbourg, November 2021 - May 2022:

Directed Energy Mission to a Nearby Star System

This team project will design a relatively near-term robotic mission to reach planets surrounding extra-solar system stars providing data on their nature and characteristics, especially as to whether they might harbour life or be capable of supporting life.



Analog Environment Coordination

Coordination between existing and future space analogue facilities will allow a standard protocol to be developed increasing the safety at each site and allowing facilities to specialize in specific areas while creating a clear path to contribute to the global body of knowledge for future off-Earth settlements.

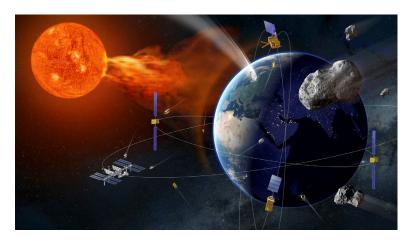
This team project will propose an implementable plan for how analogue sites can coordinate.



• (Backup): A New Global Approach to Space Threats

There is a wide range of natural and human-initiated threats in space from asteroids to space debris that threaten life on our planet as well as the sustainability of longer-term space initiatives.

This project will explore a variety of near, medium- and longer-term activities that can mitigate and perhaps eliminate some of these risks.



Sponsorship Opportunities & Recognition

\$75,000 - "Galactic Sponsor"

- All recognition benefits of "Stellar Sponsor" Level, plus ...
- The opportunity to have an article written (or jointly written) and displayed on the ISU website and in ISU's "Latest News" column highlighting project sponsorship and relevance to sponsor's mission and/or goals.
- Larger size logo/name whenever presented in conjunction with sponsored project.

\$50,000 - "Stellar Sponsor"

- All recognition benefits of "Planetary Sponsor" Level, plus ...
- Sponsorship noted in all press releases issued about the project (releases go to an international list of media outlets); Sponsor's logo/name may appear on such press releases, if desired.
- Recognition at the Closing Ceremony.

\$25,000 - "Planetary Sponsor"

- Explicit recognition of sponsorship at the final TP presentation, plus the opportunity to have in-person representation at the presentation.
- Sponsor's logo/name in the final report and executive summary.
- Sponsor's logo/name noted in post-project conference papers and presentations (e.g., at international conferences such as IAC, at invited presentation venues such as NASA, NOAA, etc.).

Note: Exclusive sponsorship can be arranged; amount to be negotiated.

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