



# The Student Day in Taiwan

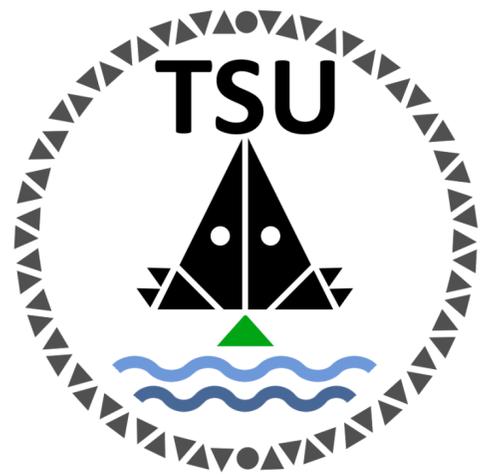
YiYu Chang

Department of Space Science and Engineering

National Central University, Taiwan

2025/11/03

# Organizer



- **5 students** from National Central University, National Cheng Kung University, and National Yang Ming Chiao Tung University.
- The entire event is sponsored by the TSU(**Taiwan Space Union**) organization, and participation is **free** for both students and faculty.
- The main participants are university, high school, and junior high school students, with the goal of helping everyone learn about the various space-related programs offered by different universities in Taiwan and the possible paths students can pursue after graduation.



# Exhibition information and results

- Around **170–180** people attended the event.
- A total of **13 teams** were invited, representing **8 different universities**.
- The event included speaker sessions, team exhibitions, laboratory tours, and an industry forum.



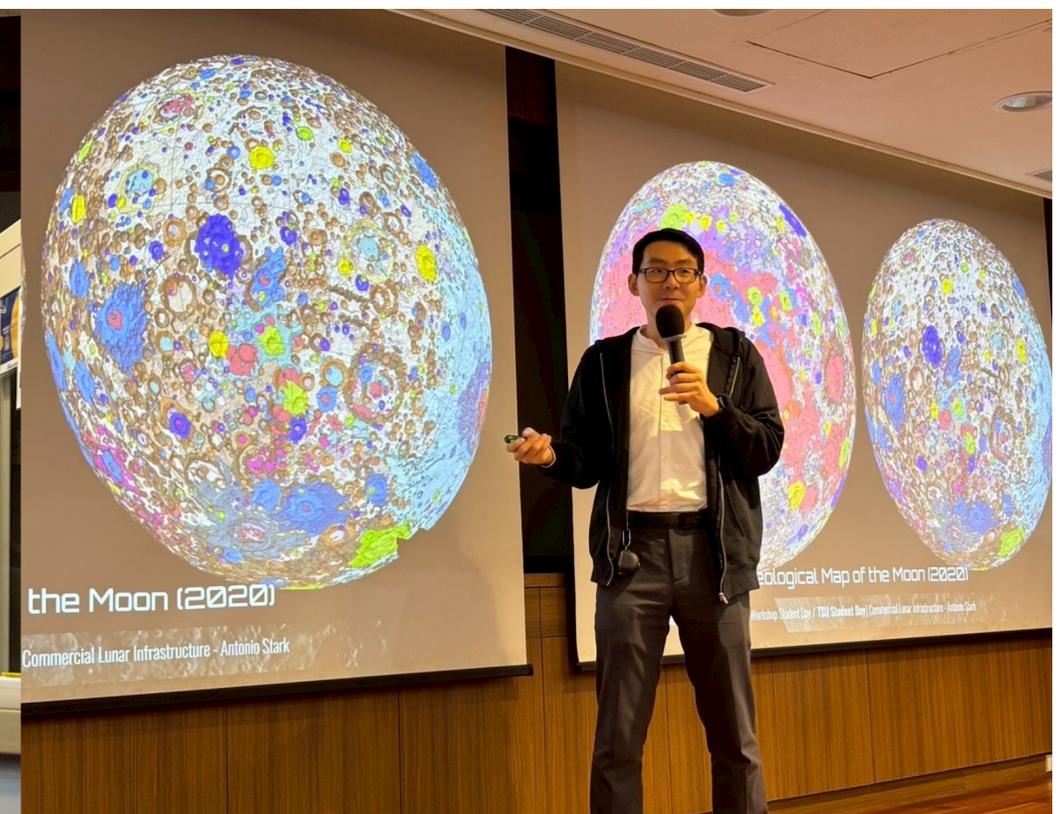
# Morning Section



Academician Wing-Huen Ip, Chair of TSU, delivered the opening remarks.



Director Jong-Shinn Wu from TASA (Taiwan Space Agency) shared the latest developments in Taiwan's space program.



Antonio Stark from ispace shared his valuable experience in executing satellite lunar missions.



# Evening Section

- Bridging the gap between industry and students, we invited young professionals from the space industry and representatives from startup companies to serve as speakers. This gave students a better understanding of the many space-related industry opportunities that exist in Taiwan.
- We invited **six** different Taiwanese companies to participate.





臺灣太空科學聯盟 Taiwan Space Union  
衛星科學工作坊 · 學生日 Student Day  
國家科學及技術委員會 National Science and Technology Council

國家科學及技術委員會  
National Science and Technology Council



# Missions and Global Collaborations of the Upper Air Dynamic Laboratory

Chieh Lung

Department of Space Science and Engineering

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2025/11/03

# Upper Air Dynamic Laboratory

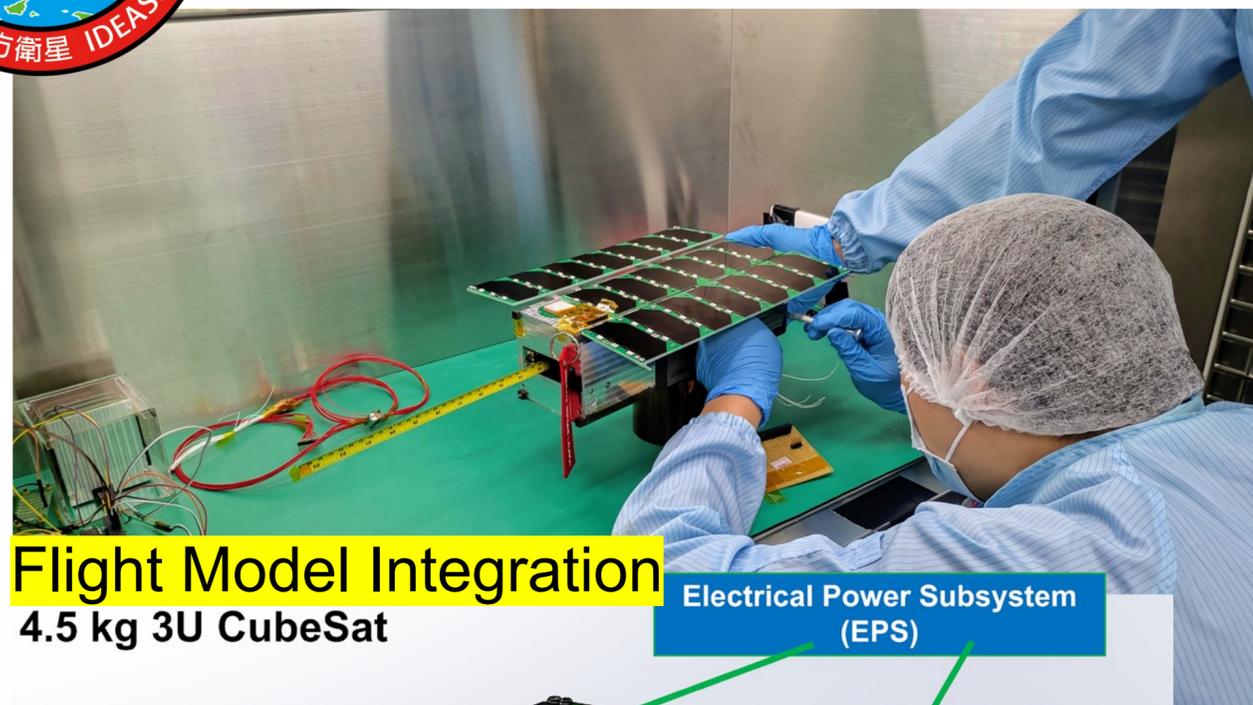
- Founded in 2013.
- Led by Prof. Loren Chang.
- Based at the Department of Space Science and Engineering, National Central University.





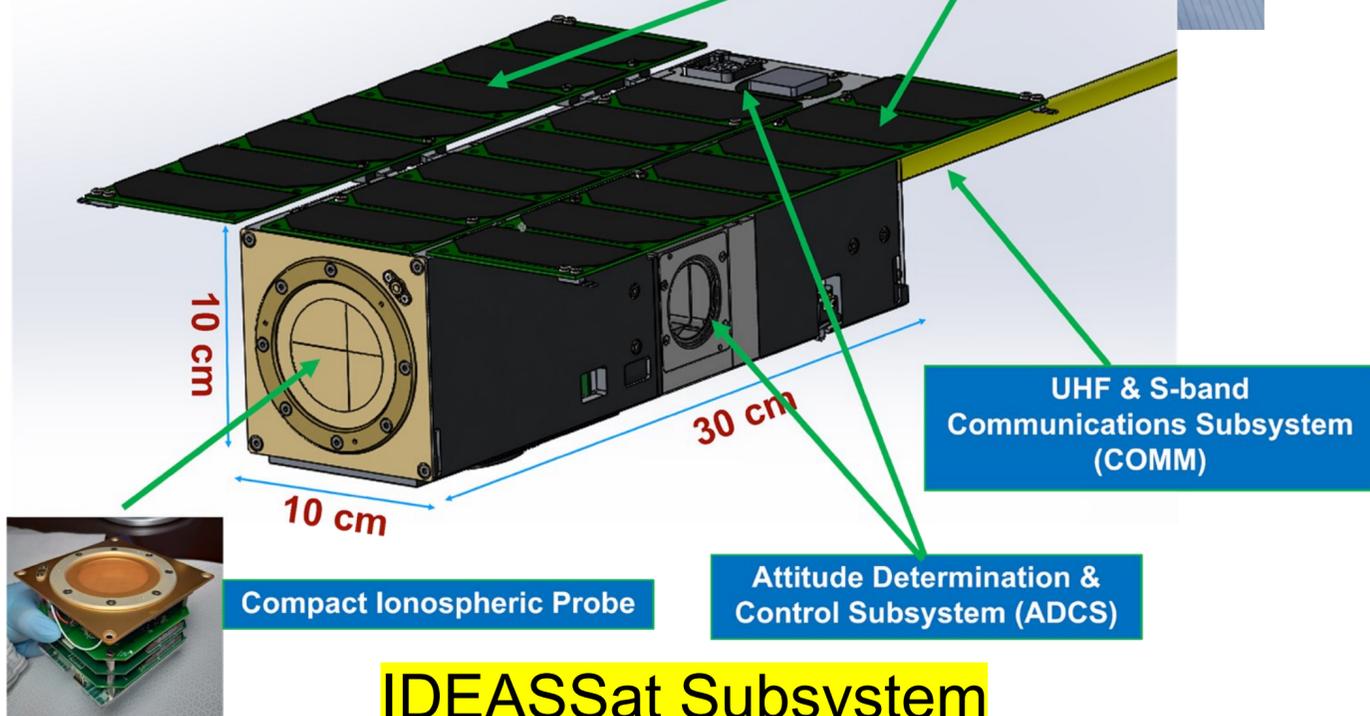
# IDEASSat/INSPIRESat-2 Mission

- Ionospheric Dynamics Explorer and Attitude Subsystem Satellite.
- 3U CubeSat carrying Compact Ionospheric Probe (in-situ plasma sensor):
- Development, Fabrication, Test: 2017 – 2020.
- Launch: January 21, 2021. SpaceX Falcon 9 to 525 km high inclination orbit. Mission lifetime: 3 months of 6 month objective.



**Flight Model Integration**  
4.5 kg 3U CubeSat

Electrical Power Subsystem (EPS)



**IDEASSat Subsystem**

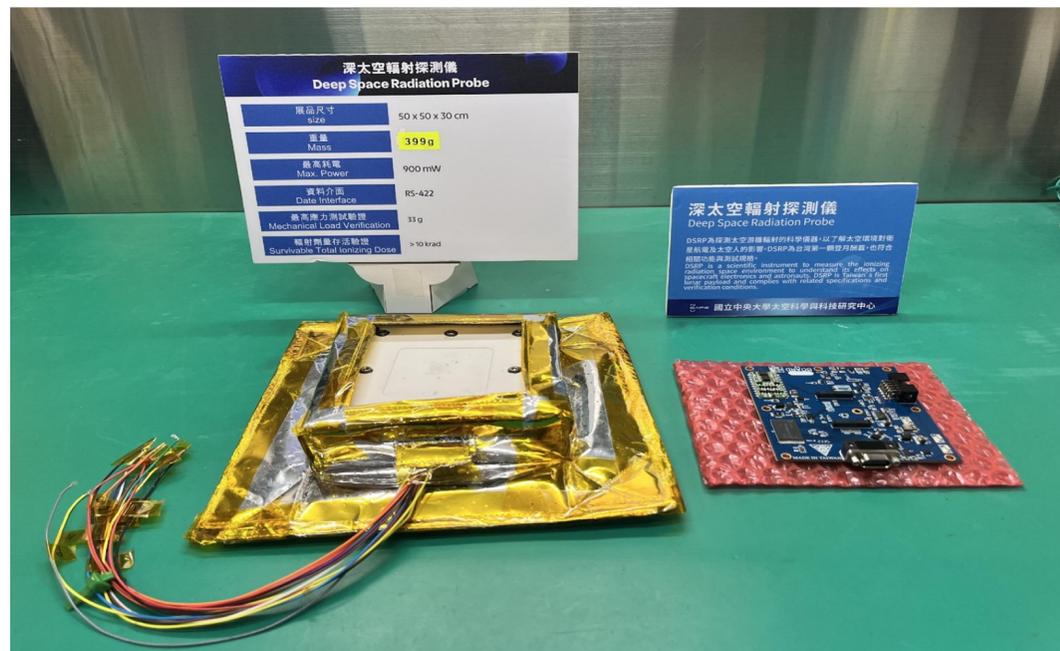


**Launch Party!!**



# Deep Space Radiation Probe

- DSRP mission aims to measurements of total ionizing dose and single event effect during the Earth-Moon transit, in lunar orbit, as well as on the lunar surface.
- Taiwan's first scientific payload for lunar lander use, with launch aboard the HAKUTO-R Mission 2 lander from ispace, inc.



Engineering Model with Multi Layer Insulator

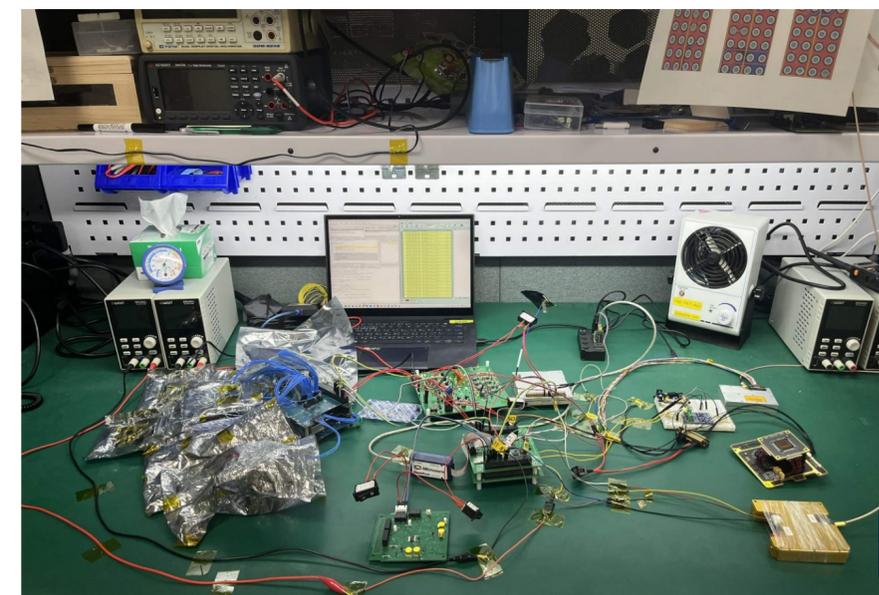
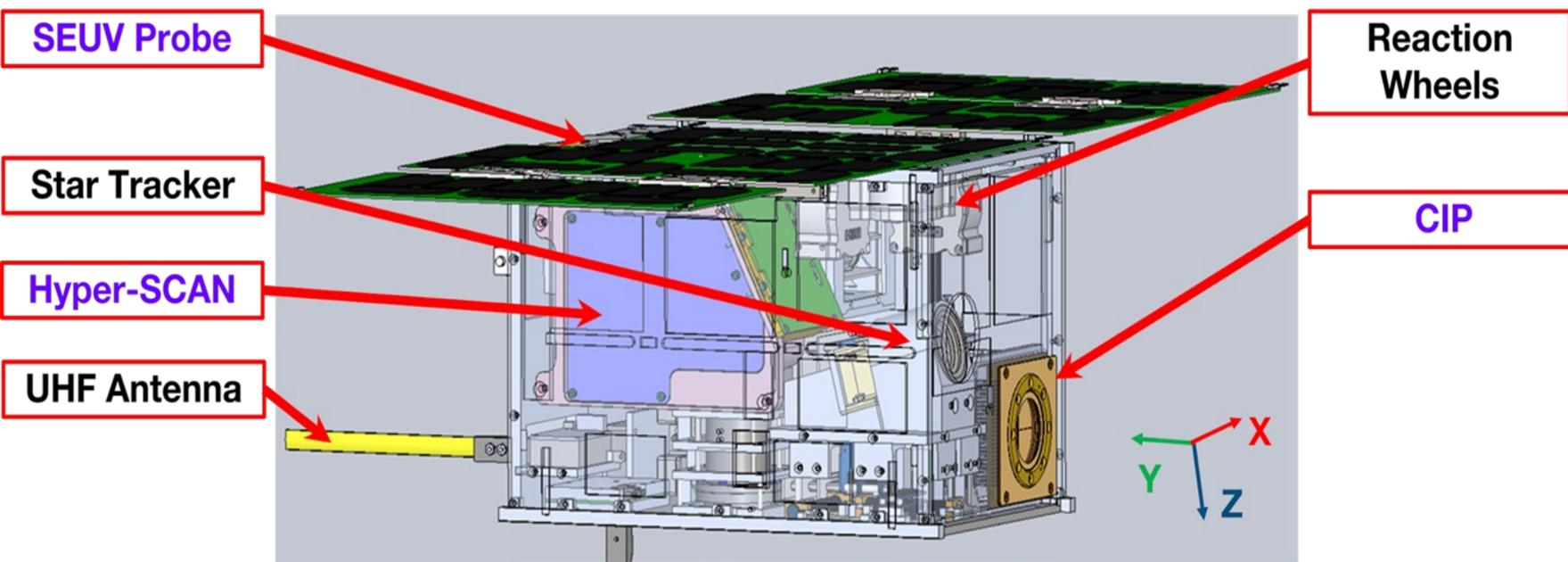
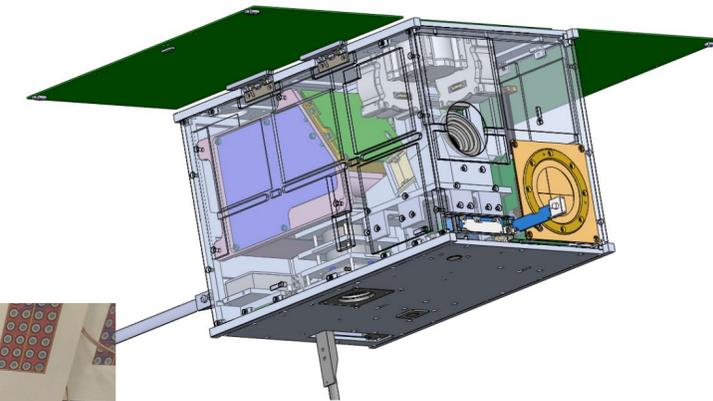


Graduate!!!

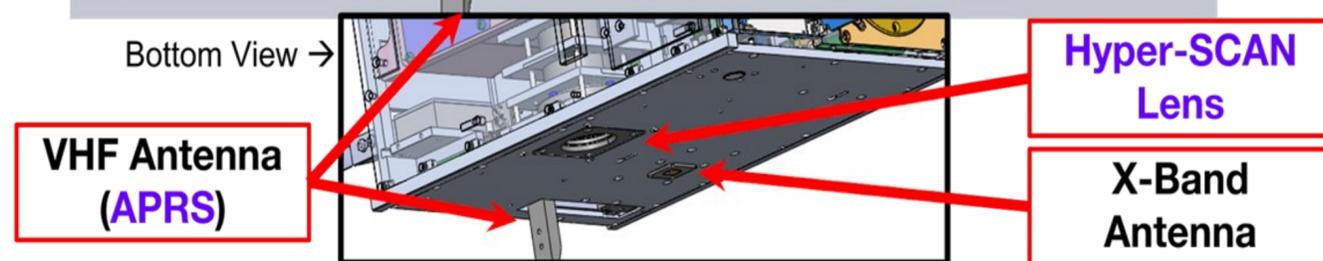


# SCION-X/INSPIRESat-6 Mission

- SCION-X (SCintillation and IONosphere eXtended) is a **12U** CubeSat that is being designed and developed by National Central University (NCU), Taiwan.



SCIONX Flatsat



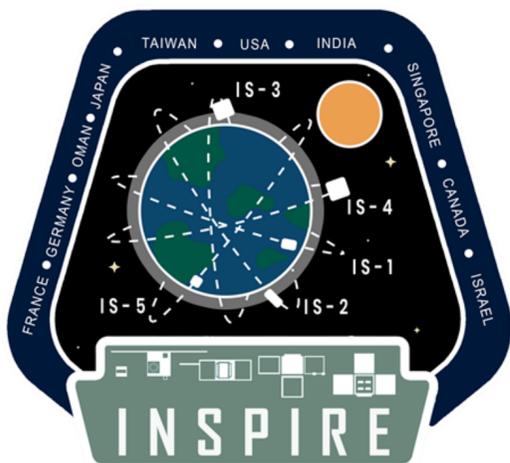
SCIONX Subsystem



SCIONX magnetometer test



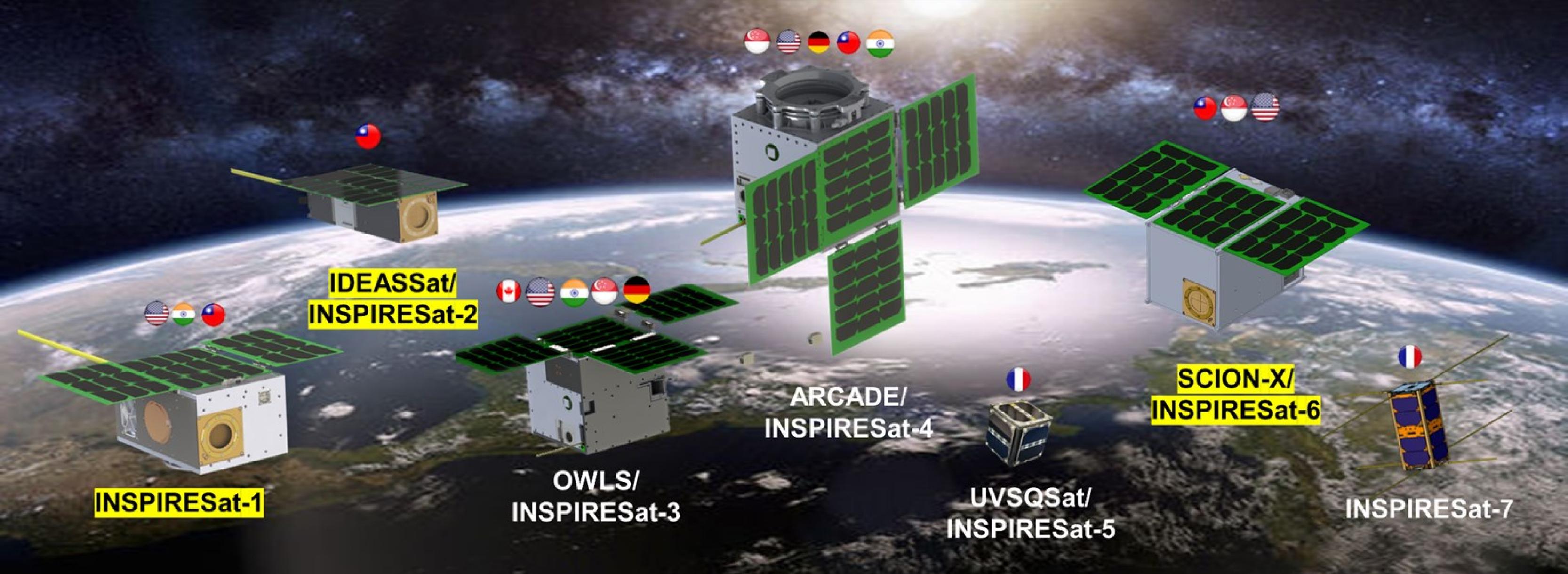
# INSPIRE



- International Satellite Program in Research and Education. Established 2015.
- Objectives:
  - Develop constellation of small satellites for science missions and supporting ground network.
  - Hands on curriculum for mission formulation, spacecraft engineering, operations, science data analysis.

| Institution  | Country   | Joined |
|--|-----------|--------|
| University of Colorado at Boulder                        | USA       | 2015   |
| Indian Institute of Space Science and Technology         | India     |        |
| National Central University                              | Taiwan    |        |
| Laboratoire Atmosphères, Milieux, Observations Spatiales | France    | 2016   |
| Nanyang Technological University                         | Singapore | 2017   |
| Sultan Quaboos University                                | Oman      |        |
| Kyushu Institute of Technology                           | Japan     |        |
| University of Alberta                                    | Canada    | 2018   |
| University of Iowa                                       | USA       |        |
| Forschungszentrum Jülich                                 | Germany   |        |
| Tel Aviv University                                      | Israel    | 2019   |

# International Satellite Program in Research and Education



**INSPIRESat-1**

**IDEASSat/  
INSPIRESat-2**

**OWLS/  
INSPIRESat-3**

**ARCADE/  
INSPIRESat-4**

**UVSQSat/  
INSPIRESat-5**

**SCION-X/  
INSPIRESat-6**

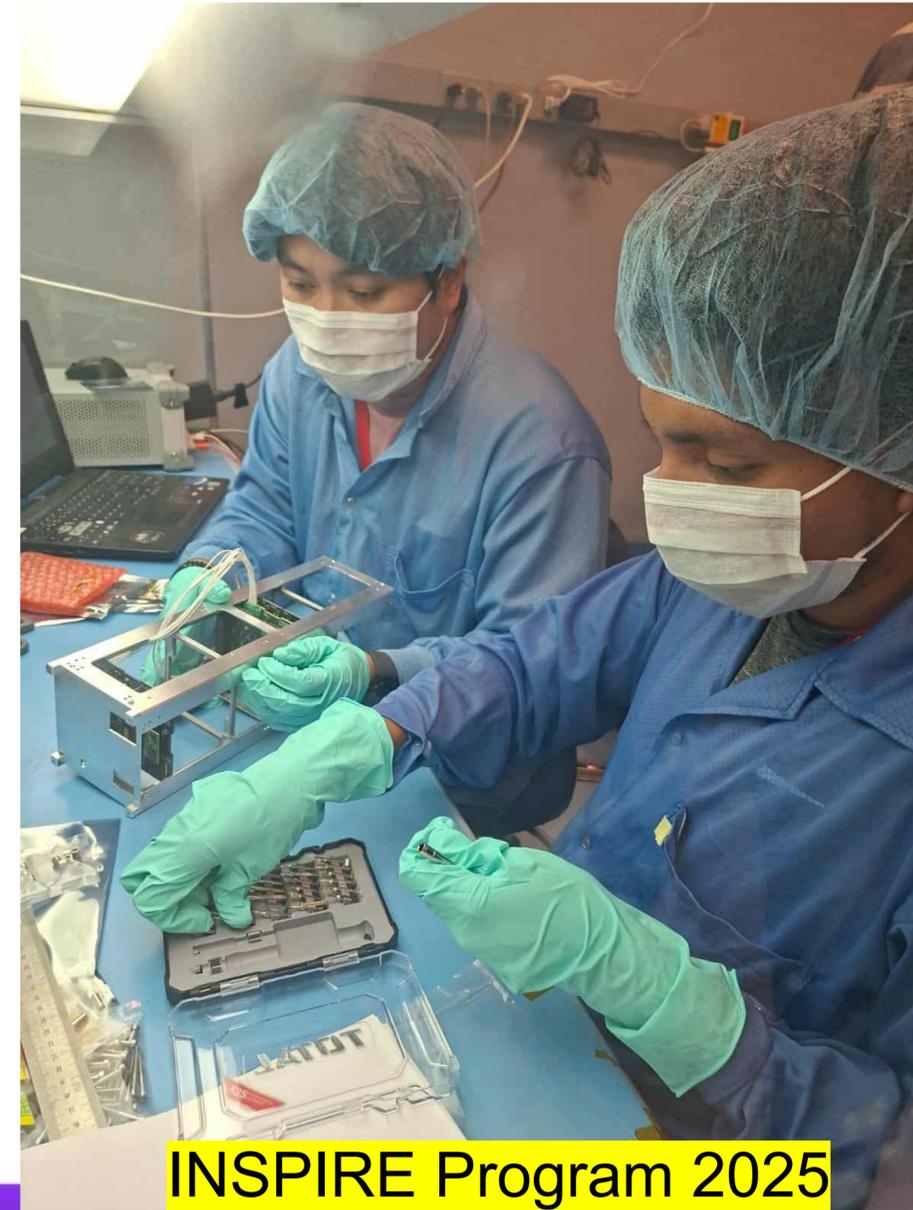
**INSPIRESat-7**

# Collaborations & Conferences

- International Satellites Program Research and Education- CU Boulder, USA



INSPIRE Program 2024



INSPIRE Program 2025



**Thank You for Your Attention!**

**Binson Shih-Pin Lee**  
**Department of Space Science and Engineering**  
**National Central University, Taiwan**  
**2025/04/10**