SCIENCE TAXI

BIO-SPIN

YURI

space biotech for a better life

Today's on demand access to low Earth orbit & microgravity

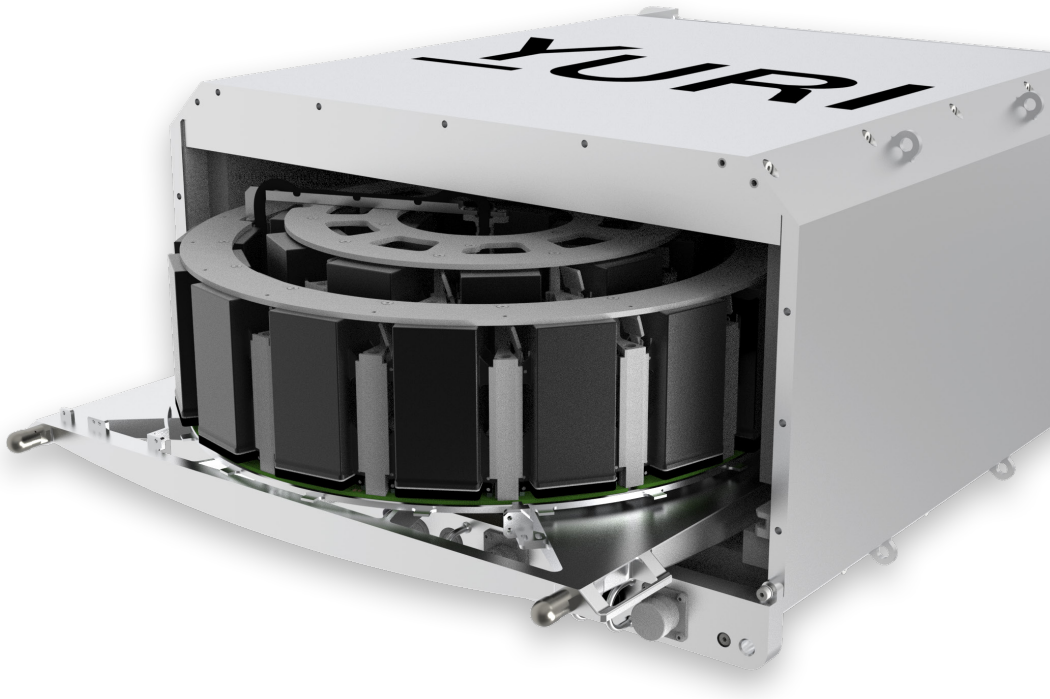
Space Incubator

FOR DRUG DISCOVERY, R&D AND FABRICATION

The **ScienceTaxi BioSpin** is a single Middeck Locker payload with a fully automated system designed for use on orbital platforms. With its standard form factor, it is **compatible with suborbital and parabolic flights**, **functioning independently** of the ISS.
The system features an incubator with a **selectable internal temperature range** between 4 °C and 40 °C, maintaining precision within +/- 0.5 °C.
The incubator's internal environment is actively monitored for temperature, oxygen levels, pressure, and humidity to ensure **optimal experimental conditions**. Internally, the system can accommodate up to 38 ScienceShell units, which can be mounted either on a centrifuge or in a stationary configuration, allowing for **flexible experimental setups**.
It operates at either 75 W or 150 W and accepts a 28 V supply voltage. Data and control communication are facilitated via an Ethernet connection with the host vehicle.

The product ScienceTaxi BioSpin has one flight unit qualified and ready for the mission. New units may be procured to allow a higher experiment throughput.

- **Interfaces and R&D based on ISS SSP 57000 standard and SSP51721**
- **Internal Volume:**
  length: 400 mm
  width: 380 mm
  height: 190 mm
- **External Volume:**
  length: 549 mm
  width: 460 mm
  height: 273 mm
- **Payload mass:**
  < 33 kg



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LIFETIME:
8 years of service lifetime

ELECTRICAL:
Power supply required from spacecraft: 75W (min) and 150W (max). Additional power can be partially supplied to ScienceShells or to enhance thermal capabilities.

Compatible with normal supply voltage (24-32.5V)

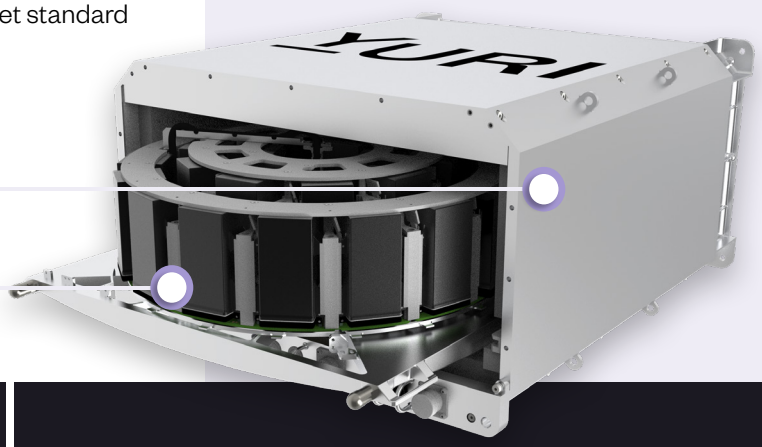
8P8C Modular Shielded Jack (RJ-45) data connector

Follows ANSI/IEEE-STD-802.2 100 BASE T Ethernet standard

TEMPERATURE:
To be cooled by an equivalent of the EXPRESS Rack Avionics Air Assembly, from which cool air is drawn via own fans.

Temperature range: 4 °C – 40 °C

	Min.	Max.
Cooling air flow	12 cfm	36 cfm
Cooling air inlett temperature	18,3 °C	29,4 °C



FLIGHT HERITAGE

1990s
Successor (BioBox) first launches on Bion, Foton and Space Shuttle

2007
Latest configuration of successor produced

2024
TRL 8 of ScienceTaxi

2025
Maiden flight on SpaceX-32

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