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From One CubeSat to a National Capability

Building space capacity in Jordan through Al-Rhim Sat

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Jordan's first satellite flew in 2018

JY1Sat, a 1U built by Jordanian students under the Crown Prince Foundation, launched 3 December 2018.



What the gap cost

The team dispersed. What had been built around the mission did not hold.

What kept moving

Experience travels with individuals. A Jordanian faculty worked on MYSAT-1, DhabiSat and Light-1 at Khalifa University, returns to Jordan.

One satellite is an event. A sequence is a capability.

Al-Rhim Sat



AL-RHIM SAT
Space Eyes On Wildlife

A 1U CubeSat that tracks endangered wildlife in remote Jordanian reserves where no terrestrial network reaches.

Selected by UNOOSA from 17 proposals across 15 countries. Funded and managed by HTU.

1U · 1.3 kg

Bought bus, integrated and tested in Jordan

LoRa payload

Telemetry from animal collars

500–600 km SSO

About 2 W average power

Launch 2027

Free slot on EXOpod Nova



A CubeSat Mockup designed and built at HTU

Critical Design Review complete. In procurement, working towards System Integration Review.

What the mission actually produced

20+

students on the team

from HTU and other
Jordanian universities

Out of 17

submitted proposals

from institutions in
15 countries

10

IAC conference papers

Research papers prepared by
undergraduate students

1st

Jordanian project
backed by UNOOSA

Access to Space
for All

The hardware is the smallest part of the return

- Training students on a UHF ground station before the satellite exists
- Frequency coordination under way, our first international process
- Link budget, thermal, power, and structural analysis done in house
- CubeSat systems engineering in the curriculum, and papers at the IAC



Let us keep talking

We are looking for partners to exchange knowledge with. If this is your first mission, we are happy to share out past experiences.

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Mission at a glance

Project	Al-Rhim Sat	Start date	2024
Developed and funded by	Al Hussein Technical University	Launch opportunity	UNOOSA and Exolaunch, EXOpod Nova
Form factor	1U	Mass	approximately 1.3 kg
Orbit	Sun-synchronous, 500–600 km	Average power	approximately 2 W
Payload	LoRa transceiver for wildlife telemetry	Downlink	UHF, amateur satellite service
Structure and bus	Commercial off the shelf	Integration	Al Hussein Technical University, Jordan
Current status	Procurement, post-CDR	Target launch	2027

Figures reflect the current design and may change through procurement and integration.